S. HRG. 107–233

DEPARTMENT OF DEFENSE APPROPRIATIONS FOR FISCAL YEAR 2002

HEARINGS

BEFORE A

SUBCOMMITTEE OF THE

COMMITTEE ON APPROPRIATIONS

UNITED STATES SENATE

ONE HUNDRED SEVENTH CONGRESS

FIRST SESSION

ON

H.R. 3338

AN ACT MAKING APPROPRIATIONS FOR THE DEPARTMENT OF DEFENSE FOR THE FISCAL YEAR ENDING SEPTEMBER 30, 2002, AND FOR OTHER PURPOSES

Department of Defense
Nondepartmental witnesses

Printed for the use of the Committee on Appropriations

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[1] Committee and subcommittee memberships—January 25 to June 6, 2001.

NOTE.—From January 3 to January 20, 2001 the Democrats held the majority, thanks to the deciding vote of outgoing Democratic Vice President Al Gore. Senator Thomas A. Daschle became majority leader at that time. Starting January 20, 2001, the incoming Republican Vice President Richard Cheney held the deciding vote, giving the majority to the Republicans. Senator Trent Lott resumed his position as majority leader. On May 24, 2001, Senator James Jeffords of Vermont announced his switch from Republican to Independent status, effective June 6, 2001. Jeffords announced that he would caucus with the Democrats, changing control of the evenly divided Senate from the Republicans to the Democrats. Senator Thomas A. Daschle became majority leader once again on June 6, 2001.

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DEPARTMENT OF DEFENSE APPROPRIATIONS FOR FISCAL YEAR 2002

WEDNESDAY, FEBRUARY 28, 2001

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

The subcommittee met at 10 a.m., in room SD–192, Dirksen Senate Office Building, Hon. Ted Stevens (chairman) presiding.

Present: Senators Stevens, Domenici, Hutchison, and Inouye.

DEPARTMENT OF DEFENSE

DEFENSE HEALTH PROGRAMS

STATEMENTS OF:

VICE ADMIRAL RICHARD A. NELSON, SURGEON GENERAL, MEDICAL CORPS, U.S. NAVY

LIEUTENANT GENERAL PAUL K. CARLTON, SURGEON GENERAL, U.S. AIR FORCE

LIEUTENANT GENERAL JAMES B. PEAKE, SURGEON GENERAL, U.S. ARMY

OPENING STATEMENT OF SENATOR TED STEVENS

Senator STEVENS. Let me welcome all of you to our first subcommittee hearing for this 107th Congress. I am delighted to see the turnout, and nice to see everybody here ahead of time.

We meet to review the Department of Defense (DOD) medical program and the Defense Health Program, or DHP. In just 1 year's time, we have seen tremendous changes in the DOD medical program. Congress has fulfilled the commitment to our military retirees to provide a lifetime of care. This benefit is now authorized, established, and clear, and we must now find a way to implement it and to pay for it and to be sure it happens as promised.

In a year's time, the challenges facing the Defense Health Program have only grown. In particular, the fiscal challenge seems to change day by day, and always in increasing amount. Senator Inouye and I and all the members of the subcommittee put great value in military medicine. We honor and will fulfil the commitments that have been made to our service members, their families, and to our veterans and our retirees.

We will first hear from the service surgeons general of the armed forces. This committee puts great stock, gentlemen, in your views and your professionalism because you are charged to make DOD's medical programs work, and we thank you for what you do. As a matter of fact, each of us are beneficiaries of your system.

Just last night we heard the broad outlines of what President Bush is preparing for his fiscal year 2002 budget. We are not going to press you today on the details of that budget. We will receive those details on April 3rd. What we seek from you today is your professional assessment of the current challenges facing the Defense Health Program and your forecast of changes for the next year.

Gentlemen, we always appreciate full and frank discussion and we will look forward to sharing views with you today. We will do our best to work with you, as we have always.

General Paul Carlton, we welcome you back, General. General Jim Peake, congratulations on your promotion. We welcome you here today. You have a most impressive background, General. We are very eager to work closely with you. Admiral Dick Nelson, I regret to be informed this is the last time you will testify before this committee. You have been refreshingly candid and open with us, Admiral.

Admiral NELSON. Thank you, sir.

Senator STEVENS. We appreciate that. We commend you for your service, your 34 years of distinguished service to our country, and wish you and your wife Alice the very best. A young man like you should not think about retiring.

Before we go to your statements, Senator Inouye, you have a statement?

STATEMENT OF SENATOR DANIEL K. INOUYE

Senator INOUYE. Mr. Chairman, I thank you very much. I wish to associate myself with your remarks. I would like to thank the Admiral for his service to his Nation. I wish you the very best in the future.

General Peake, as I told you, the combat badge impresses me. Did you know that he has a combat badge?

Senator STEVENS. Yes.

Senator INOUYE. General Carlton, we are always happy to have you here with us.

General CARLTON. Thank you, sir.

Senator INOUYE. Mr. Chairman, my statement is a rather lengthy one. I would like to have it made part of the record. However, I believe that all of us here should note that this is the first Defense Subcommittee hearing of the year and understand this was done deliberately.

We could have had the Chiefs of Staff for the Air Force, the Army, or the Navy or the Secretary of Defense, but we decided to have you people first. This is because if the quality of life of our men and women in the service are not what they think is appropriate, then we are going to have a terrible time meeting the requirements of our military family.

So we wanted all of you to realize that this subcommittee considers your activities to be of utmost importance to our Nation's security. Senator Stevens and I are not as young as the three of you sitting there (Surgeon Generals of the Army, Navy and Air Force). We have been around for a little while. We were in World War Two, when all three of you were youngsters. At that time, in my regiment only 4 percent of my men had dependents. The men were

all young. Patients in military hospitals at that time looked like what the military was mainly composed of, men.

Today we find that there are more gynecologists than orthopedic surgeons, more pediatricians than anesthesiologists. This is the way it should be because, as you know, today the ratio of active duty to family members is a bit different. In the Army 75 percent of the troops have dependents, the same is true for the Air Force and the Navy. If we do not maintain the high quality of life that you have been providing, we will have trouble maintaining an adequate military force.

Oftentimes in discussing the security of this Nation, we only seem to concern ourselves with things like B–2s, F–22s, and cruisers. But when we come down to it, it is not the guns, it is not the bombs; it is what you do that maintains our security at the level that we should have it.

So, gentlemen, I join my chairman in welcoming you. I assure you that we are looking forward to working with you.

Thank you, Mr. Chairman.

[The statement follows:]

PREPARED STATEMENT OF SENATOR DANIEL K. INOUYE

Good morning. I join the Chairman in welcoming General Peake, General Carleton, and Admiral Nelson to discuss Military Medical Programs. I would like to take this opportunity to acknowledge Vice Admiral Nelson who is making his final appearance before this Committee as Surgeon General of the Navy. I thank Admiral Nelson and congratulate him, for his long service to the Navy and the nation, and his assistance to this committee. I wish him much success in his future endeavors.

I would like to extend a special welcome to General Peake who is appearing before this Committee for the first time as the Surgeon General of the Army.

I hope General Peake finds this hearing to be a worthwhile experience, and that it will be the first of many fruitful discussions.

The last session of Congress focused on many health care issues including medical errors, patient safety, and for the military health care system, the National Defense Authorization Act, which authorized TRICARE to cover not only active duty service members and their family members, but to expand its coverage to include military retirees and their family members and survivors.

Service members on active duty are concerned about access to health care services for their family members. We must ensure that the men and women who have committed to a career of service to our nation, both present and past, have a health care benefit worthy of their sacrifice. In order to provide this key quality of life service to our newly-expanded population, we must enable all members of the Military Health Service System team to contribute fully to meeting this new and greater demand for health care based on the professional abilities of each team member.

Historically it has been the Military Health System that has established successful new paradigms for health care, and we must continue this proud tradition. The Military Health System provides a far superior quality of life for our service members and their families, but we must never forget to build on our past successes to meet present and future challenges successfully .

Continuing fiscal restraints require us to make the best use of our resources while maintaining quality. I am particularly pleased with the continued advancements made in telemedicine and other medical technology, I commend the Department Of Defense for being a leader of this innovative modern technology.

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, retention of Military Health System personnel, implementation of the expanded TRICARE benefit plan, and new technology initiatives. I look forward to hearing your testimony.

Senator STEVENS. Senator Hutchison, Senator Domenici, do you have any comments to make at the beginning of the hearing?

STATEMENT OF SENATOR KAY BAILEY HUTCHISON

Senator HUTCHISON. Yes, Mr. Chairman. Before I get to my line of questions, I would like to say a couple of things.

First of all, thank you very much. Clearly you are one of the priorities that Congress is making for our military personnel. As we upgrade quality of life, health care along with housing and pay are the linchpins of that commitment that we are making.

I am introducing a bill today that will extend the period under which victims of the Gulf War syndrome will be able to receive treatment and be able to, hopefully, get coverage. I am very disappointed that we have not gone nearly as far as I think we should to find the cause of the Gulf War syndrome, and I think that we are on the cusp of finding that cause and I hope that you will be committed at the Department of Defense to helping us get the momentum to support the research that seems to have some hope of finding the cause of Gulf War syndrome.

This is the tenth anniversary of the end of the Gulf War and one in seven of our veterans have symptoms, some of which are unexplained, but all of which occurred following service and those symptoms were not present before the individual left to go serve our country. I do not ever want it to be said that we did not do everything possible to support those who have served our country when they have ailments that they did not have when they left.

Last but not least, obviously we are on a program now of TRICARE for Life and improving TRICARE. I think that it was right that we kept the commitment to veterans finally that they would have health care for life. But we are going to be faced with the appropriations issues, because there are shortfalls in the funding that we now have if we are going to keep that commitment.

But we are going to keep the commitment and we will find the money and we just need you to implement that commitment that we will have quality health care for life for our retirees and the veterans who are entitled to it and those who are active duty personnel.

I thank you, and I hope I am here for the questioning round, but in case I am not I wanted to make those points. Thank you.

Senator STEVENS. Senator Domenici.

STATEMENT OF SENATOR PETE V. DOMENICI

Senator DOMENICI. Mr. Chairman thank you very much. I think it is very important that these hearings occur early and, with your permission, I would like to just make a little statement that analyzes the shortfalls in the Defense Health Program that have occurred. I think the big problem we have in funding our commitments in the area of health is that the Defense Department, for better or for worse, has underestimated the inflationary add-on for these programs. They do it consistently, and it is always extremely low.

We have a 5 year period of time when they estimated inflation at 1.2 percent inflation and the actual inflation rate was 4.8 percent. Now, frankly, with all the work that the chairman and the ranking member do to put the right amount of money in the appropriation bill, I do not think it is fair to ask them to second guess

you on the inflation rate and say, well, we are funding everything, but we do not believe your inflation rate.

I think the Department has to get on the ball and put an inflation rate in that is realistic. In institutions of health delivery, the cost is going up, perhaps as fast as in United States generally.

I have a statement which details that this is underfunded. Mr. Chairman, I think one of the best things you could do with the ranking member is to insist and encourage the Department to put the right number in. The Department puts the wrong number in because they do not estimate the inflation in at a high enough level. We fund it at the requested level, and then we all get in a trap around here because we have to have a supplemental to ultimately pay for it. Then, the appropriators are asked, why are you having the supplemental?

Well, indeed, Mr. Chairman, we are going to have to have a supplemental this year. You and I know that. The newest item is that we are going to have to add $1.2 billion, and maybe $1.4 billion, as the shortfall for the health programs in this Department. If you all would like to check that, that is a question we would submit for the record. We think the 2001 shortfall is $1.2 billion, but it may be as high as $1.4 billion.

I think you should tell us whether that number is right. I am going to go asking for the supplemental amount because I think we ought to not leave these programs hanging without the money behind them. That causes some grief. Sometimes it causes delay, and in all cases it causes the health delivery system to put their payment plan, hold it in abeyance until the money comes.

So, Mr. Chairman, would you put my statement in the record which details this. I have introduced a measure here; it is S. 395, and I want to call to everyone's attention to the $1.2 billion. When you do your supplemental I am sure you are going to include this because it is a shortfall for the year we are in over and above what you have appropriated, not because of you and the ranking member, but because the inflation rate was underestimated.

[The statement follows:]

PREPARED STATEMENT OF SENATOR PETE V. DOMENICI

Since 1994, budgets for the Defense Health Program have been submitted to Congress without requesting enough spending to cover all known medical and health care expenses.

DOD has been projecting an average annual inflation rate of 1.8 percent in the Defense Health Program, but the actual average rate for the past five years is 4.9 percent. Just last year, DOD predicted 2.1 percent inflation for the Defense Health Program in 2001; experts are predicting the rate to be 7.9 percent.

This has resulted in expenses being incurred but no funds to pay the bills. Chairman Stevens has led Congress by funding these gaps with additional spending, often in emergency supplemental appropriations bills.

But the delays from inadequate budget requests means healthcare providers do not know if or when they will receive full funding. As a result, appointments for healthcare can be complicated, and the services rendered can be delayed or degraded. A system that many already find troublesome can become exasperating.

This problem affects an active beneficiary population of almost six million, including 1.5 million active duty servicemen and women, 1 million retirees, and 3.3 family dependents.

President Bush has already pledged that he will fully fund Tricare costs in 2002 at an estimated $3.9 billion, but it is not yet known if he and Secretary Rumsfeld know about or have addressed remaining funding gaps in the rest of the Defense Health Program.

The appropriations legislation introduced on Monday provides an "urgent" (not emergency) supplemental appropriation of $1.2 billion for the Defense Health Program for 2001.

I also am making four specific recommendations for the Defense Health Program for the 2002 congressional budget resolution:

—Sufficient budget authority and outlays to enable the enactment of the 2001 appropriations legislation.

—An additional $1.4 billion in fiscal year 2002 to accommodate actual inflation in DOD health care, rather than the unrealistic under-estimate left by the officials of the outgoing Administration.

—To accommodate future inflation, the budget resolution will also provide the needed budget authority and outlays to accommodate 5 percent inflation for the next ten years for a total of almost $18 billion.

—The Congressional Budget Office has not included additional discretionary spending in its "baseline" for the "Tricare for Life" program. The technical reasons for this are esoteric, but the money is substantial—$9.8 billion over ten years.

It is unacceptable to make health care promises but not to include in the budget the money required to make good on them. The steps being taken here will make Congress' word good.

SUPPLEMENTAL

Senator STEVENS. Thank you very much, Senator. I do note your introduction of the bill to authorize that amount and to request it and I appreciate that.

In fiscal year 2000 our subcommittee added $1.3 billion, $1.311 billion in supplemental. We are in sort of a cycle where many of the medical costs come in supplementals. Senator Inouye and I do not like that, either. We have to get to the point where these moneys are put into a regular bill and we do not face supplementals for health care costs, because it is very hard to plan for expenditures in the beginning if they do not come about until some time in July. With one-quarter of the year left, they are not much good to the military.

Admiral Nelson, we are glad to have you here. We welcome you for your last appearance. We would be pleased to have your statement, sir.

Admiral NELSON. Thank you. Mr. Chairman, Senator Inouye, distinguished members: First, I would like to thank you, and thank the Congress, for the health benefit contents to the National Defense Authorization Act of 2001. I think the importance and the significance of it to our military beneficiaries, the active duty, family members, as well as our retirees who have reached age 65 and over, is extremely important to the future of our military. So I thank you for that.

COMPENSATION

I look forward to the full resourcing of the new benefits, so that we can implement them.

My written testimony addresses many of Navy medicine's accomplishments of the past year and I will not dwell on that here today. But rather, there are two areas of concern to me that I would like to discuss briefly with you. The first one deals with our medical providers, both in their provider satisfaction and also retention. During my years as commander of a medical center and then these last almost 3 years as surgeon general, I have become increasingly concerned about the issues surrounding retention of our critical health care specialists.

Last year, last spring, I asked the Center for Naval Analysis (CNA) to do a study for us on that subject. I got the results of that study, in December. Also last year, the three surgeons general, in recognizing the same problem, asked the Assistant Secretary for Health Affairs to initiate a flag officer review board to review special pays for providers. That board has not completed its work yet, I do not believe, but I have looked at CNA, the single most significant issue dealing with our provider's satisfaction today is the compensation. It has been 10 years since a review was done of the compensation package.

The impact that I am seeing in the Navy is a loss of critical wartime specialties. The pipeline it takes to build a surgeon or an orthopedist is 10 to 12 years.

Senator STEVENS. You are talking about in uniformed personnel, not contract personnel?

Admiral NELSON. Yes, sir, I am. I am talking uniformed people in our direct care system, operating in our hospitals and clinics.

I am concerned that, and the three of us were concerned enough to ask for a review of retention and compensation. I am hopeful that this year we will be able to bring forward some initiative for action which will impact positively on retention.

Senator STEVENS. What is going to be the timing on that, Admiral, do you know?

Admiral NELSON. I do not know that, sir. That rests with the Department of Defense, Health Affairs.

Senator STEVENS. We will raise it with them, and tell them to be prepared to tell us. I think you are right. I agree with you on that.

When was the last time those were adjusted, Admiral?

Admiral NELSON. 1991, sir. There has been—the study that CNA did for us indicated that there had been up to a 24 percent further gap in pay for like physicians.

Senator STEVENS. Have you got any statistics about the reenlistment rates and the attrition because of the loss of adjustment in those salaries?

Admiral NELSON. Yes, sir. Yes, sir, I do. I have it for all specialties in the Navy. There is a study going on now, at the request of Congress, to look at all three services. I think that is about complete, and we can provide that for the record if you would like.

Senator STEVENS. I would like to see that as soon as it is ready.

Admiral NELSON. I can provide you the Navy study immediately, yes, sir.

[The information follows:]

CIM D0002053.A1/Final
August 2000

Comparison of Navy and Private-Sector Physicians' Total Compensation, by Medical Specialty (Supplement to Annotated Briefing on Provider Satisfaction)

Shayne Brannman

Center for Naval Analyses
4401 Ford Avenue • Alexandria, Virginia 22302-1498

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EXECUTIVE SUMMARY

Introduction and Findings

Congress authorizes the Department of Defense to offer financial incentives to uniformed physicians to attract and retain the desired force structure. A policy board annually reviews physician manning, civilian income data, and military health system requirements to determine the Multi-year Special Pay (MSP) and Incentive Special Pay (ISP) plan rates that will be offered to uniformed physicians. The Navy Surgeon General has asked the Center for Naval Analyses (CNA) to evaluate physicians' job satisfaction and retention within the existing climate to determine if major issues exist. The scope of the study was expanded to include a comparative analysis of compensation for Navy physicians continuing a military career versus leaving for a private-sector track.

The "compensation package" offered to both military and private-sector physicians comprises many elements. It is vital that policy-makers and individual military physicians understand all the components of compensation (salary, incentive pays, pension, vacations, health care, and other benefits) to make a prudent comparison of the military and the private sector. We find that a substantial current compensation gap exists between military and private-sector physicians, particularly at the end of the 7-year career point, and the disparity in total compensation varies widely by medical specialty. Our findings show, however, that as Navy physicians accrue more military service, it becomes more lucrative for them to complete 20 years, retire, and then pursue a private career. This information memorandum documents the results of these compensation comparisons. A comparative analysis of the enclosed compensation comparisons, the factors influencing Navy physician job satisfaction, and historical retention data will be published in a separate CNA document (CAB D0002045.A1--Provider Satisfaction Study).

Background

One of the most important issues facing Navy Medicine is how to continue to cultivate a workforce that is dedicated to caring for patients, knowledgeable, committed to continuous performance and productivity improvement, and is adaptable and competent in both wartime and peacetime benefit settings. The implementation of TRICARE is placing more demands on providers. Military medical officers are increasingly asked to work in interdisciplinary teams, to collect and interpret data, and to be active participants in quality improvement efforts while being held accountable for expanding productivity, patient satisfaction, and the training of non-physician providers within the work center.

The appropriate level of compensation for individuals serving in the military is continually being monitored. This issue is particularly important for military physicians because they are costly to access and train, and they have skills that are readily interchangeable to the private sector. If compensation is perceived too low for the demands and duties required, medical officers may abandon the military for a private-sector career path. Conversely, total compensation should be no higher than the amount required to attract and retain a quality force.

Approach

We have developed a model comparing total compensation (salary, special and incentive pays, pension, and other benefits) for 24 physician specialties based on the most typical Navy career.[1] For each of these specialties, we present a series of compensation comparisons that reflect two different methodological approaches for making compensation comparisons.[2] The first type of comparison takes a Navy physician's compensation (total value of current cash and benefits) as of July 2000 and compares this to the compensation of his or her civilian equivalent.[3] We refer to this as a cross-sectional comparison. We have calculated cross-sectional compensation comparisons for Navy physicians who are at one of three decision points in their careers—completion of 7, 12, or 17 years of service. We present these cross-sectional comparisons because these data are often a compelling factor for many individuals faced with the decision to continue in their current career path or change course. For this reason, the cross-sectional comparisons may have a significant role in physician retention.

From an economic perspective, when faced with the decision to continue with a particular career path or choose another path, one should compare the stream of future cash and benefits of each option rather than look at just a single point in time. We typically make this type of comparison by looking at the present value of each compensation stream.[4] Therefore, present value compensation comparisons represent the second type of comparisons presented in our study. We calculated the present value of the stream of future cash and benefits that a Navy physician could expect to receive by staying on active duty, or by separating at one of the same three career points (7, 12, and 17 years of service) and practicing in the private sector.[5] Because we consistently applied the most typical Navy career progression profile assumptions to each specialty and because residency and fellowship training lengths vary, physicians in some specialties are still obligated and not eligible to leave the service at the 7- and 12-year marks. For these cases, we do not compute the compensation comparisons.

Both the cross-sectional and present value comparisons are presented for both median and 75th percentile private-sector data. Our compensation comparisons may reflect the low end of the physician income spectrum because they do not capture salary data from civilian physicians working in private practice.[6] Therefore, we believe that our compensation comparisons may

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[1] Based on discussions with representatives from the Chief, Bureau of Medicine and Surgery, the model adopts an accession, career, and training profile typical of most Navy physicians. The profile assumes graduation from medical school at age 26; due course promotion; a 4-year Armed Forces Health Professional Scholarship Program (AFHPSP) followed by a 1-year active duty internship (GME-1); and 2 years as a general medical officer followed by commencement of full-time in-service residency training. Specialties requiring fellowship training are assumed to occur after a 2-year staff utilization tour in the primary specialty.

[2] The Hay Group served as subcontractor for all cash and benefits compensations. We wish to acknowledge the efforts of Michael W. Gaffney and Myriam Michaels of the Hay Group.

[3] By civilian equivalent, we mean a physician of the same specialization with equivalent years of practice as a fully trained specialist working in the private sector. See appendix A for complete details.

[4] Present value is a convenient way to compare two different income streams. The present value tells you what the value of a future stream of payments is worth if it were paid in one lump sum *today*.

[5] Specifically, we compare the options of 1) remaining on active duty until retirement (at 20 years of service) followed by practicing in the private sector until age 65, and 2) separating at 7, 12, or 17 years of service and practicing in the private sector until age 65.

[6] Private-sector compensation was culled from proprietary databases representing over 90 employer-based healthcare organizations and 22,000 physician incumbents. We feel that comparisons to this sample are appropriate

underestimate the potential compensation differential for those Navy physicians who choose to separate and have the option to join *select* private practices. For these individuals, the 75th percentile gives some indication of the upper end possibilities within the private sector.

Results

Figure 1 summarizes the current compensation (the sum of cash salary, special and incentive pays, and benefits) at 7 years of service. The current compensation of uniformed services ranges from 12 percent below the median private sector for family practice to 48 percent below for orthopedic surgery at the 7-year-of-service juncture.[7]

When we look at the current compensation at the 12-year-of-service point, the Navy uniformed services range from 2 percent below the median private sector for family practice to 56 percent below for neurosurgery (figure 2).

The present values of compensation data are the result of hypothetical "stay-leave" decisions. The present value calculation differs from the current compensation "snapshot" because it accounts for the remaining Navy compensation a specialist would receive until reaching 20 years of service, the projected military retirement income, and the cash and benefits from working in the private sector until age 65.

Figure 3 illustrates the comparison of the present value calculation at 12 years of uniformed service. This compares the present value of the stream of future cash and benefits that a Navy physician could expect to receive by staying on active duty until 20 years of completed service (from the year of service depicted) and then practicing in the private sector until age 65 versus separating now and working in the private sector until age 65. This calculation shows that the present value of the uniformed services career compensation option ranges from 13 percent above the median private sector for family practice and general pediatrics to 7 percent below for orthopedic surgery.

Finally, figure 4 shows the case for Navy physicians with 17 years of completed service. This compares the present value of the stream of future cash and benefits that a Navy physician could expect to receive by staying on active duty until 20 years of completed service and then practicing in the private sector until age 65 versus separating now and working in the private sector until age 65. The present value of the total Navy uniformed compensation career option exceeds the median private sector for all specialties except neurosurgery, which is 3 percent below the private sector.

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because the characteristics of the organizations reporting data most closely resemble the military environment (56 percent are hospital-based facilities, 29 percent are group practices, and 15 percent are Health Maintenance Organizations).

[7] Because we consistently applied the most typical Navy career progression profile assumption to each specialty and because residency/fellowship program lengths vary, neurosurgery, otolaryngology, cardiology, plastic surgery, urology, gastroenterology, and hematology/oncology specialties will not have compensation data at the current 7-year and 12-year-of-service present value career decision junctures.

Conclusions

The data presented in this information memorandum provide policy-makers and military physicians a tool to compare the compensation packages of uniformed and private-sector physicians. It also helps illuminate the value of benefits as an integral part of total compensation in addition to salary and special pays. Maintaining the desired force structure requires close monitoring of the pay gap between military and private-sector physicians and of retention rates.

Figure 1. Total Current Compensation at 7 Years of Completed Service--
Navy Uniformed Service vs. Private-Sector Median Physician

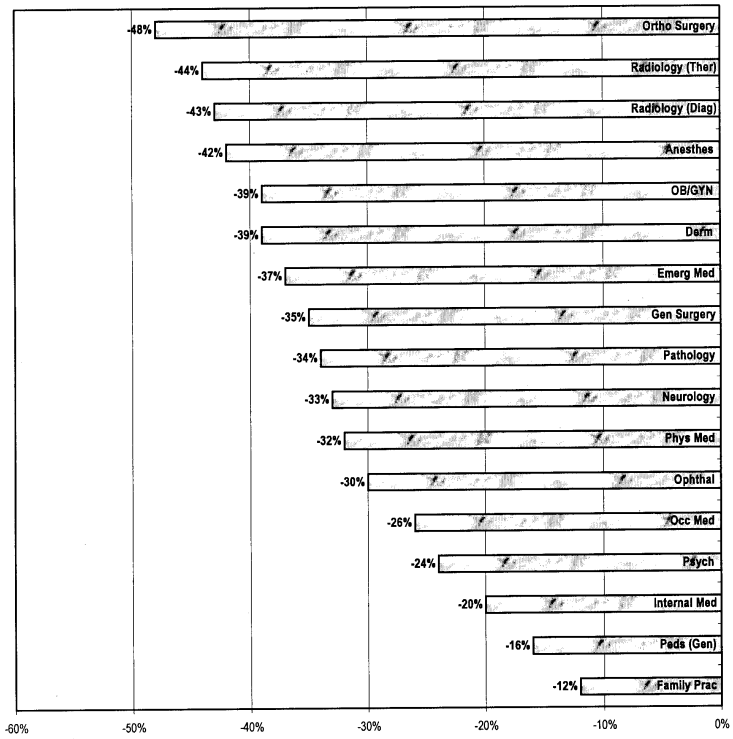


Figure 2. Total Current Compensation at 12 Years of Completed Service--
Navy Uniformed Service vs. Private-Sector Median Physician

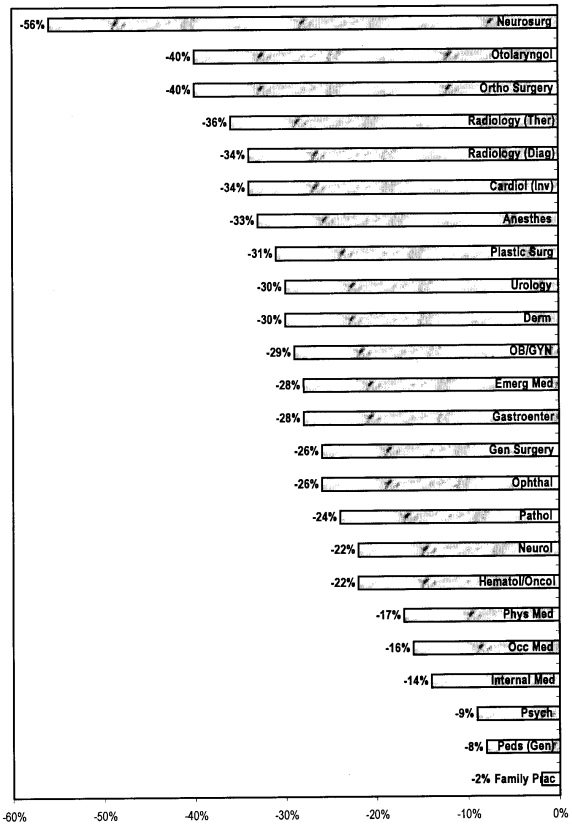


Figure 3. Present Value of Total Compensation at 12 Years of Completed Service--
Navy Uniformed Service vs. Median Private Sector, by Specialty

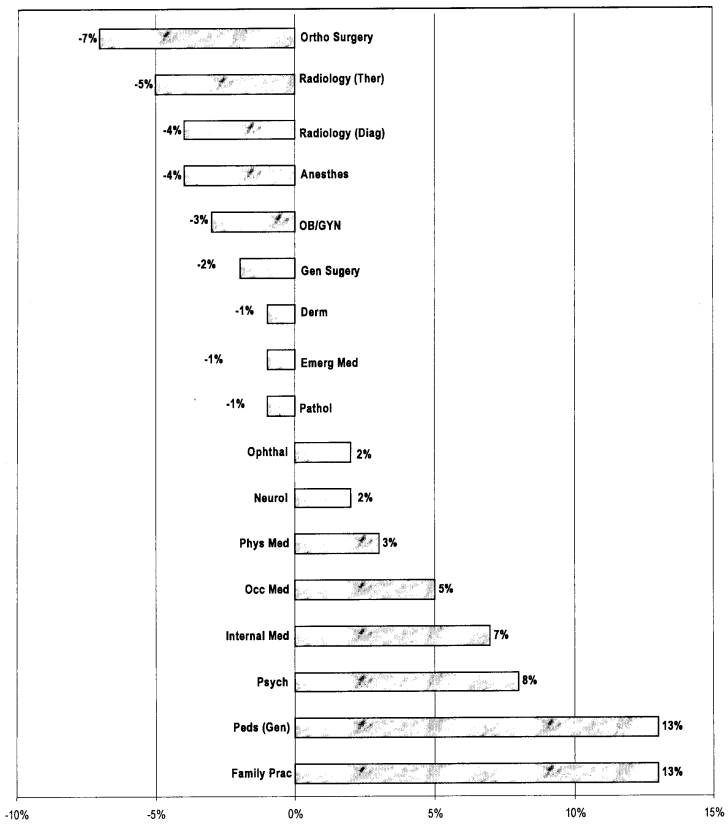
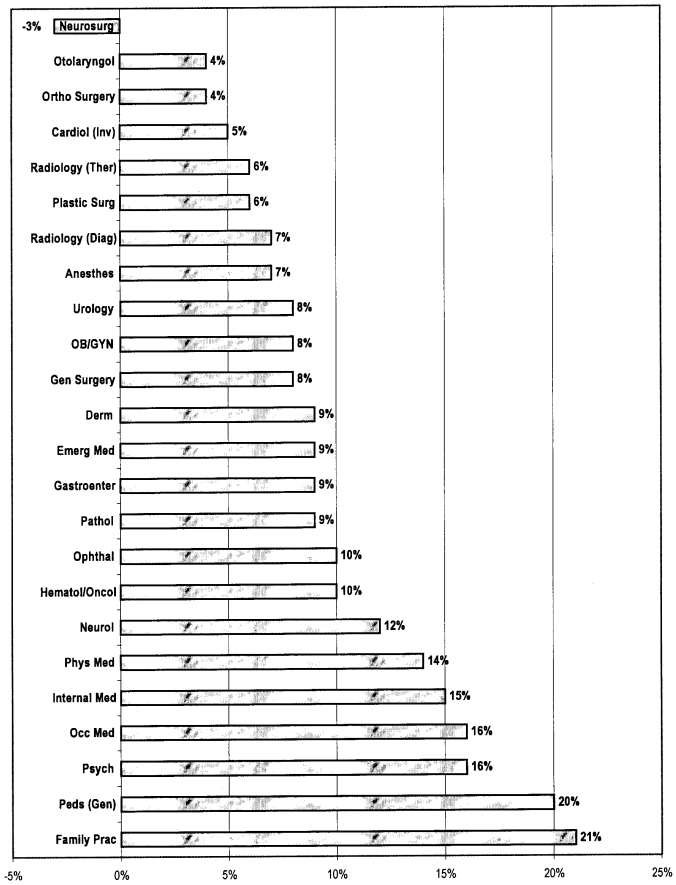


Figure 4. Present Value of Total Compensation at 17 Years of Completed Service--
Navy Uniformed Service vs. Median Private Sector, by Specialty



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Chapter 1: Introduction and Approach

Organization of Analysis

Total compensation comparisons are presented in two formats. The first type of comparison is a "shapshot" of the value of current cash compensation and benefits for Navy physicians who are presently at one of three points during their careers.

The second type compares the present value of the stream of future cash and benefits that a Navy physician could expect to receive by staying on active duty, or by separating at one of the same three decision points and practicing in the private sector.

For a particular career path, the expected present value of total compensation is a lump sum amount that would have to be deposited at interest to provide the same stream of value that the pay and benefits system would provide over the expected lifetime of the physician following that career path.

The three points during a Naval medical career that were chosen for comparison with private sector physicians were upon completion of 7, 12 or 17 years of service. Seven and 12 years of service are logical career decision points. Seventeen years of service is also included because it illustrates the rapidly growing value of the military retirement system as the physician approaches eligibility at 20 years of service.

Physicians in some specialties and subspecialties may not be able to separate at each of the three points because they are either in residency or fellowship training, or they are serving an active duty service commitment resulting from training. Table 1-1 on the following page summarizes the possible separation decisions by specialty.

Elements of Compensation

Compensation includes all cash and benefits[1]. For Navy physicians, compensation includes Regular Military Compensation (RMC), medical officer special and incentive pays, health care, military retirement, the Survivor Benefit Plan, and other active duty and retired Navy benefits.

Private sector compensation includes base salary, incentive pay, health care, pension and capital accumulation plan, and other benefits. Capital accumulation

[1] The study did not consider the subsidization value for the Armed Forces Health Professional Scholarship Program, nor did it make compensation comparisons during the period of residency training.

plans include 401(k) plans and 403(b) plans. The value shown for capital accumulation plans is based on employer matching contributions only. Amounts resulting from employee contributions are not included. Executive benefits, such as supplemental non-qualified retirement plans, are not included. The value of Navy-sponsored training, either before or after accession is not included.

Calculations reflect Navy and private sector cash and benefits available on 1 July 2000.

Appendix A provides complete details on the Navy and private sector compensation elements.

Table 1-1: Possible Separation Points for Navy Physicians

Specialty	7 YOS	12 YOS	17 YOS
Anesthesiology	No	Yes	Yes
Cardiology (Invasive)	N/A	No	Yes
Dermatology	No	Yes	Yes
Emergency Medicine	No	Yes	Yes
Family Practice	Yes	Yes	Yes
Gastroenterology	N/A	No	Yes
General Surgery	No	Yes	Yes
Hematology/Oncology	N/A	No	Yes
Internal Medicine	Yes	Yes	Yes
Neurology	No	Yes	Yes
Neurosurgery	No	No	Yes
Obstetrics/Gynecology	No	Yes	Yes
Industrial & Occupational Medicine	Yes	Yes	Yes
Ophthalmology	No	Yes	Yes
Orthopedic Surgery	No	Yes	Yes
Otolaryngology	No	No	Yes
Pathology	No	Yes	Yes
Pediatric Primary Care	Yes	Yes	Yes
Physical Medicine & Rehabilitation	No	Yes	Yes
Plastic & Reconstructive Surgery	N/A	No	Yes
Psychiatry	No	Yes	Yes
Radiology (Diagnostic)	No	Yes	Yes
Radiology (Therapeutic)	No	Yes	Yes
Urology	No	No	Yes

Assumptions

The study makes a number of important career progression, economic and other assumptions in order to make consistent Navy-private sector compensation comparisons. Appendix A describes each assumption.

The analysis shows compensation comparisons of Navy physicians with private sector physician specialists who have the same number of years of practice in the specialty or subspecialty.

The study adopts an accession and training profile typical of most Navy physicians. The profile assumes a four-year Health Profession Scholarship Program (HPSP) followed by a one-year active duty internship (GME-1), and two years as a General Medical Officer (GMO). Residency training follows the GMO tour. Those Navy physicians receiving fellowship training do so after a two-year tour in their residency specialty. Residency and fellowship training are assumed to occur on active duty.

Private sector physicians are assumed to begin a year of internship following medical school at age 26, followed immediately by residency training and then fellowship training for invasive cardiology, gastroenterology, hematology/ oncology, and plastic & reconstructive surgery. The study also assumes that private sector physicians enter practice in their specialty/subspecialty following residency/fellowship training.

As an example for internal medicine, at age 33 a Navy physician would have completed seven years of service, composed of one year of GME-1, two years as a GMO, two years in internal medicine residency, and two years of practice as an IM specialist. This physician's total compensation would be compared with a private sector IM specialist with two years of practice in the specialty.

A Navy orthopedic surgeon at age 38 with 12 completed years of service would have spent that time serving one year in GME-1, two years as a GMO, four years in orthopedic residency, and five years practicing in the specialty. The appropriate compensation comparator would be a private sector orthopedic surgeon with five years of practice in the specialty.

A Navy cardiologist at age 43 with 17 completed years of service would have spent that time serving one year in GME-1, two years as a GMO, two years in internal medicine residency, two years in an internal medicine staff utilization tour, three years in cardiology fellowship training, and seven years of practice as a cardiologist. The appropriate compensation comparator would be a private sector cardiologist with seven years of practice in the specialty.

The study adopts the same economic and actuarial assumptions used by the DoD actuary in the annual valuation of the military retirement system. These include assumptions about future wage growth, inflation, interest rates and mortality.

Data Sources

The study uses the Basic Pay and Regular Military Compensation tables that are effective 1 July 2000. Specialty and incentive pays are those effective 1 October 1999. The study assumes no future increases in specialty or incentive pays, primarily because most increases require congressional legislation that cannot be predicted with certainty.

Private sector cash compensation by specialty was extracted from the 1999 Physician's Total Compensation Survey conducted by the Hay Group. The survey represents responses from more than 22,300 physicians employed nationwide in 91 group practices, Health Maintenance Organizations, and hospital-based facilities. The data are trended by 4.5 percent to 2000.

The study used private sector benefits data from the organizations participating in the Physician's Compensation Survey. Benefit values for both Navy and private sector physicians were determined using the methodology described in Appendix C.

Individual private sector compensation data are not separately identified by whether the physician is board certified or a graduate of a U.S. medical school. These factors can affect total compensation levels. In some cases, survey respondents indicated the employer applied a salary differential for board certification, but specific amounts are not available. Most Navy physicians are board certified and the majority are graduates of U.S. schools. Consequently, total private sector compensation data are shown for the median (50th percentile[2]) and the 75th percentile[3]. We believe this presents a reasonable range within which it is possible to make valid comparisons. For one specialty, neurosurgery, we had an insufficient sample size to develop a reliable estimate of the 75th percentile.

Snapshot of Current Compensation

As an example, Table 1-2 summarizes current compensation information for the internal medicine specialty, illustrating the value of annual cash and benefits for a 33-year-old Navy physician with seven completed years of service.

[2] The median value divides the data set in half. Half of the physicians have total annual compensation above the median and half have total compensation below the median.

[3] Twenty-five percent of physicians have total compensation above the 75th percentile level and 75 percent have total compensation below this amount.

Table 1-2: Current Annual Compensation Internal Medicine – 7 Completed Years of Service

Element of Compensation	Navy	Private Sector (50th Percentile)	Private Sector (75th Percentile)
RMC/Base Salary	$63,300	$140,300	$152,500
Incentive Pays	50,000		
Total Cash	113,300	140,300	152,500
Benefits	36,000	47,100	49,300
Total Compensation	149,300	187,400	201,800

Present Value of Compensation

The present value of compensation data are the result of hypothetical "stay-leave" decisions. They represent the present values of compensation resulting from a decision to either:

- Remain on active duty and retire after 20 years of Navy service and then practice in the private sector until age 65, or
- Separate now and practice in the private sector until age 65.

Tables 1-3 and 1-4 summarize the information for a 38-year-old Navy orthopedic surgeon who has completed 12 years of service.

Table 1-3: Present Value of Decision to Stay or Separate Orthopedic Surgery – 12 Completed Years of Service; Private Sector Median Salary

Element of Compensation	Navy +	Second Career =	Total Navy	Priv Sector (Median)
RMC/Base Salary	$628,100	$3,395,700	$4,023,800	$5,206,100
Incentive Pays	498,500		498,500	
Total Cash	1,126,600	3,395,700	4,522,300	5,206,100
Retirement+Surv Ben	550,800	651,800	1,202,600	931,600
Other Benefits	179,200	702,900	882,100	994,900
Total Benefits	730,000	1,354,700	2,084,700	1,926,500
Total Compensation	1,856,600	4,750,400	6,607,000	7,132,600

Table 1-4: Present Value of Decision to Stay or Separate Orthopedic Surgery – 12 Completed Years of Service; Private Sector 75th Percentile Salary

Element of Compensation	Navy +	Second Career =	Total Navy	Priv Sector (75th Percentile)
RMC/Base Salary	$628,100	$3,785,700	$4,413,800	$5,942,900
Incentive Pays	498,500		498,500	
Total Cash	1,126,600	3,785,700	4,912,300	5,942,900
Retirement+Surv	550,800	657,700	1,208,500	940,100
Ben	179,200	747,200	926,400	1,091,400
Other Benefits				
Total Benefits	730,000	1,404,900	2,134,900	2,031,500
Total Compensation	1,856,600	5,190,600	7,047,200	7,974,400

Chapter 2: Results

Results by Medical Specialty and Subspecialty

This chapter provides the compensation comparisons of Navy and private sector physicians for the following medical specialties and subspecialties.

- Anesthesiology
- Cardiology (Invasive)
- Dermatology
- Emergency Medicine
- Family Practice
- Gastroenterology
- General Surgery
- Hematology/Oncology
- Internal Medicine
- Neurology
- Neurosurgery
- Obstetrics/Gynecology
- Industrial/Occupational Medicine
- Ophthalmology
- Orthopedic Surgery
- Otolaryngology
- Pathology
- Pediatric Primary Care
- Physical Medicine & Rehabilitation
- Plastic & Reconstructive Surgery
- Psychiatry
- Radiology (Diagnostic)
- Radiology (Therapeutic)
- Urology

Two types of comparisons are presented for Navy and private sector physicians who have completed 7, 12, and 17 years of service:

- Current annual cash compensation and benefits "snapshot"
- Present value of future cash and benefits where the numbers compare the financial consequences of remaining on active duty until 20 years of service, then retiring and practicing in the private sector until age 65; or separating now and practicing in the private sector until age 65.

All comparisons are made at the median and 75th percentiles of private sector physician compensation.

Anesthesiology

Current Annual Compensation

Years of Completed Navy Service	Compensation Element	Navy	Private Sector (50th Percentile)	Private Sector (75th Percentile)
7	RMC/Base Salary	$63,300	$205,700	$225,500
	Incentive Pays	$58,000		
	Total Cash	$121,300	$205,700	$225,500
	Total Benefits	$36,000	$63,600	$71,900
	Total Compensation	$157,300	$269,300	$297,400

Years of Completed Navy Service	Compensation Element	Navy	Private Sector (50th Percentile)	Private Sector (75th Percentile)
12	RMC/Base Salary	$77,600	$212,900	$235,500
	Incentive Pays	$66,000		
	Total Cash	$143,600	$212,900	$235,500
	Total Benefits	$42,900	$66,900	$74,600
	Total Compensation	$186,500	$279,800	$310,100

Years of Completed Navy Service	Compensation Element	Navy	Private Sector (50th Percentile)	Private Sector (75th Percentile)
17	RMC/Base Salary	$86,100	$220,200	$245,400
	Incentive Pays	$65,000		
	Total Cash	$151,100	$220,200	$245,400
	Total Benefits	$47,400	$70,100	$77,300
	Total Compensation	$198,500	$290,300	$322,700

Navy compensation is RMC, special and incentive pays, and benefits as of 1 July 2000

Private Sector compensation is total salary (including base and incentives) and benefits as of 1 July 2000

Anesthesiology

Present Value of Future Compensation and Benefits

Median Private Sector Salaries

Years of Completed Navy Service	Compensation Element	Navy Service	+ Second Career =	Total Navy Service	Private Sector (50th Percentile)
7	RMC/Base Salary Incentive Pays				
Separation after 7 yrs of service not an option due to service commitments for residency training.	Total Cash				
	Retirement + SBP Other Benefits				
	Total Benefits				
	Total Compensation			N/A	N/A

Years of Completed Navy Service	Compensation Element	Navy Service	+ Second Career =	Total Navy Service	Private Sector (50th Percentile)
12	RMC/Base Salary Incentive Pays	$628,100 $452,500	$2,872,700	$3,500,800 $452,500	$4,486,800
	Total Cash	$1,080,600	$2,872,700	$3,953,300	$4,486,800
	Retirement + SBP Other Benefits	$550,800 $179,200	$528,900 $600,000	$1,079,700 $779,200	$756,400 $840,200
	Total Benefits	$730,000	$1,128,900	$1,858,900	$1,596,600
	Total Compensation	$1,810,600	$4,001,600	$5,812,200	$6,083,400

Years of Completed Navy Service	Compensation Element	Navy Service	+ Second Career =	Total Navy Service	Private Sector (50th Percentile)
17	RMC/Base Salary Incentive Pays	$273,900 $180,900	$3,254,300	$3,528,200 $180,900	$3,907,600
	Total Cash	$454,800	$3,254,300	$3,709,100	$3,907,600
	Retirement + SBP Other Benefits	$674,000 $76,100	$598,900 $635,900	$1,272,900 $712,000	$695,000 $737,500
	Total Benefits	$750,100	$1,234,800	$1,984,900	$1,432,500
	Total Compensation	$1,204,900	$4,489,100	$5,694,000	$5,340,100

Navy compensation is RMC, special and incentive pays, and benefits as of 1 July 2000

Private Sector compensation is total salary (including base and incentives) and benefits as of 1 July 2000

Anesthesiology

Present Value of Future Compensation and Benefits

P75 Private Sector Salaries

Years of Completed Navy Service	Compensation Element	Navy Service	+ Second Career =	Total Navy Service	Private Sector (75th Percentile)
7	RMC/Base Salary Incentive Pays				
Separation after 7 yrs of service not an option due to service commitments for residency training.	Total Cash				
	Retirement + SBP Other Benefits				
	Total Benefits				
	Total Compensation			**N/A**	**N/A**

Years of Completed Navy Service	Compensation Element	Navy Service	+ Second Career =	Total Navy Service	Private Sector (75th Percentile)
12	RMC/Base Salary Incentive Pays	$628,100 $452,500	$3,209,700	$3,837,800 $452,500	$4,961,600
	Total Cash	$1,080,600	$3,209,700	$4,290,300	$4,961,600
	Retirement + SBP Other Benefits	$550,800 $179,200	$560,600 $650,100	$1,111,400 $829,300	$801,400 $931,200
	Total Benefits	$730,000	$1,210,700	$1,940,700	$1,732,600
	Total Compensation	$1,810,600	$4,420,400	$6,231,000	$6,694,200

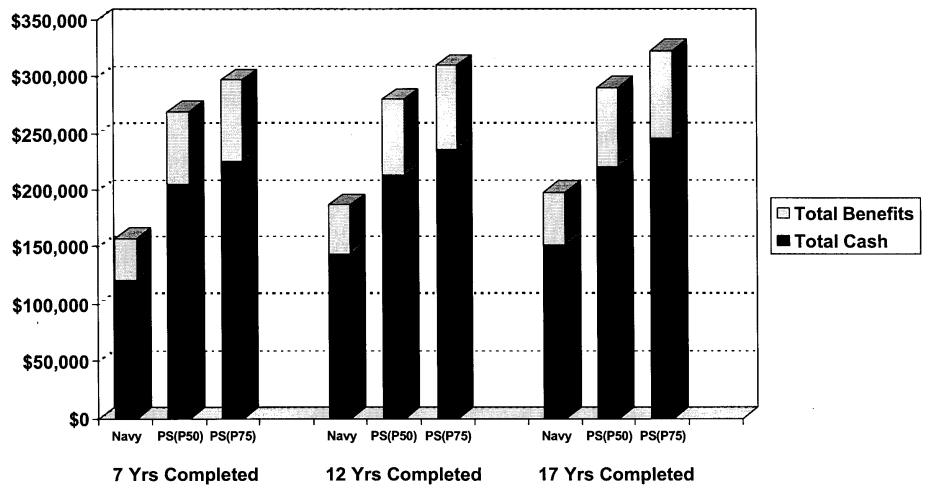
Years of Completed Navy Service	Compensation Element	Navy Service	+ Second Career =	Total Navy Service	Private Sector (75th Percentile)
17	RMC/Base Salary Incentive Pays	$273,900 $180,900	$3,640,400	$3,914,300 $180,900	$4,354,800
	Total Cash	$454,800	$3,640,400	$4,095,200	$4,354,800
	Retirement + SBP Other Benefits	$674,000 $76,100	$634,300 $691,400	$1,308,300 $767,500	$736,000 $808,200
	Total Benefits	$750,100	$1,325,700	$2,075,800	$1,544,200
	Total Compensation	$1,204,900	$4,966,100	$6,171,000	$5,899,000

Navy compensation is RMC, special and incentive pays, and benefits as of 1 July 2000

Private Sector compensation is total salary (including base and incentives) and benefits as of 1 July 2000

Anesthesiology

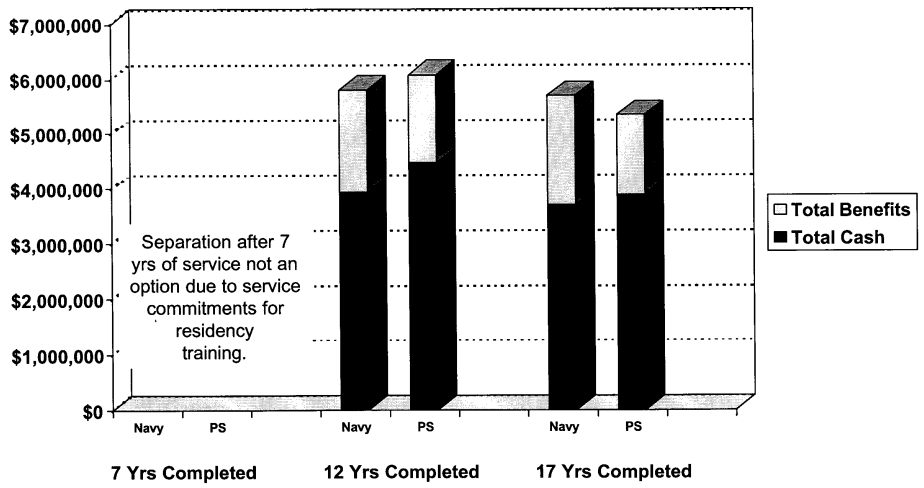
Current Annual Compensation



Anesthesiology

Present Value of Future Compensation & Benefits

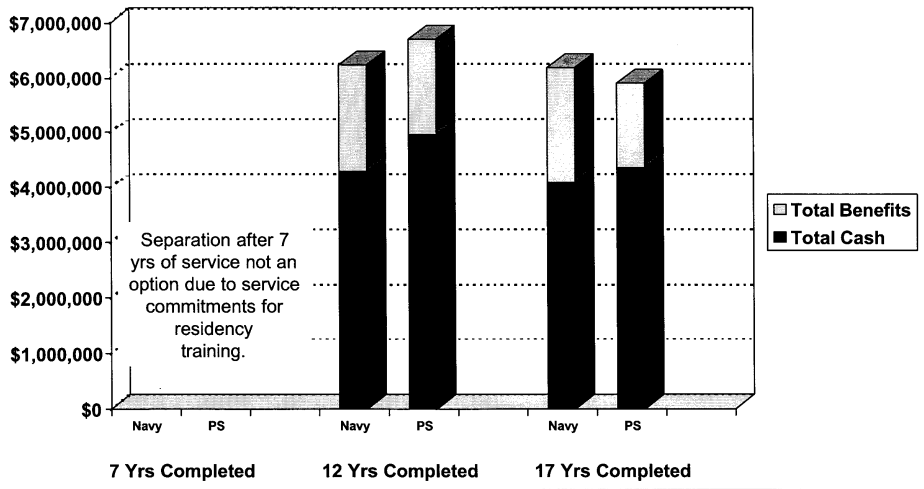
(Median Private Sector Salaries)



Anesthesiology

Present Value of Future Compensation & Benefits

(P75 Private Sector Salaries)



Cardiology (Invasive)

Current Annual Compensation

Years of Completed Navy Service	Compensation Element	Navy	Private Sector (50th Percentile)	Private Sector (75th Percentile)
7	RMC/Base Salary	$63,300	$140,300	$152,500
	Incentive Pays	$50,000		
	Total Cash	$113,300	$140,300	$152,500
	Total Benefits	$36,000	$47,100	$49,300
	Total Compensation	$149,300	$187,400	$201,800

Years of Completed Navy Service	Compensation Element	Navy	Private Sector (50th Percentile)	Private Sector (75th Percentile)
12	RMC/Base Salary	$77,600	$225,400	$266,700
	Incentive Pays	$73,000		
	Total Cash	$150,600	$225,400	$266,700
	Total Benefits	$42,900	$67,900	$93,000
	Total Compensation	$193,500	$293,300	$359,700

Years of Completed Navy Service	Compensation Element	Navy	Private Sector (50th Percentile)	Private Sector (75th Percentile)
17	RMC/Base Salary	$86,100	$229,100	$267,900
	Incentive Pays	$65,000		
	Total Cash	$151,100	$229,100	$267,900
	Total Benefits	$47,400	$71,000	$90,000
	Total Compensation	$198,500	$300,100	$357,900

Navy compensation is RMC, special and incentive pays, and benefits as of 1 July 2000

Private Sector compensation is total salary (including base and incentives) and benefits as of 1 July 2000. At 7 years of completed service, private sector compensation is for internal medicine. At 12 and 17 years of completed service, private sector compensation is for cardiology.

Cardiology (Invasive)

Present Value of Future Compensation and Benefits

Median Private Sector Salaries

Years of Completed Navy Service	Compensation Element	Navy Service	+Second Career =	Total Navy Service	Private Sector (50th Percentile)
7	RMC/Base Salary	$1,330,200	$2,336,600	$3,666,800	$5,054,000
	Incentive Pays	$671,500		$671,500	
	Total Cash	$2,001,700	$2,336,600	$4,338,300	$5,054,000
	Retirement + SBP	$488,300	$470,300	$958,600	$797,500
	Other Benefits	$244,000	$588,300	$832,300	$916,300
	Total Benefits	$732,300	$1,058,600	$1,790,900	$1,713,800
	Total Compensation	$2,734,000	$3,395,200	$6,129,200	$6,767,800

Years of Completed Navy Service	Compensation Element	Navy Service	+Second Career =	Total Navy Service	Private Sector (50th Percentile)
12	RMC/Base Salary				
	Incentive Pays				
Separation after 12 yrs of service not an option due to service commitments for sub-specialty training.	Total Cash				
	Retirement + SBP				
	Other Benefits				
	Total Benefits				
	Total Compensation			**N/A**	**N/A**

Years of Completed Navy Service	Compensation Element	Navy Service	+Second Career =	Total Navy Service	Private Sector (50th Percentile)
17	RMC/Base Salary	$273,900	$3,356,500	$3,630,400	$4,066,400
	Incentive Pays	$187,400		$187,400	
	Total Cash	$461,300	$3,356,500	$3,817,800	$4,066,400
	Retirement + SBP	$674,000	$601,800	$1,275,800	$698,400
	Other Benefits	$76,100	$642,500	$718,600	$746,300
	Total Benefits	$750,100	$1,244,300	$1,994,400	$1,444,700
	Total Compensation	$1,211,400	$4,600,800	$5,812,200	$5,511,100

Navy compensation is RMC, special and incentive pays, and benefits as of 1 July 2000.

Private Sector compensation is total salary (including base and incentives) and benefits as of 1 July 2000. At 7 years of completed service, private sector compensation assumes completion of cardiology specialty training following same schedule as in Navy practice. At 17 years of completed service, private sector assumes cardiology specialty.

Cardiology (Invasive)

Present Value of Future Compensation and Benefits

P75 Private Sector Salaries

Years of Completed Navy Service	Compensation Element	Navy Service	+Second Career =	Total Navy Service	Private Sector (75th Percentile)
7	RMC/Base Salary	$1,330,200	$2,718,200	$4,048,400	$5,965,800
	Incentive Pays	$671,500		$671,500	
	Total Cash	$2,001,700	$2,718,200	$4,719,900	$5,965,800
	Retirement + SBP	$488,300	$446,500	$934,800	$756,000
	Other Benefits	$244,000	$688,200	$932,200	$1,237,600
	Total Benefits	$732,300	$1,134,700	$1,867,000	$1,993,600
	Total Compensation	$2,734,000	$3,852,900	$6,586,900	$7,959,400

Years of Completed Navy Service	Compensation Element	Navy Service	+Second Career =	Total Navy Service	Private Sector (75th Percentile)
12	RMC/Base Salary				
	Incentive Pays				
Separation after 12 yrs of service not an option due to service commitments for sub-specialty training.	Total Cash				
	Retirement + SBP				
	Other Benefits				
	Total Benefits				
	Total Compensation			N/A	N/A

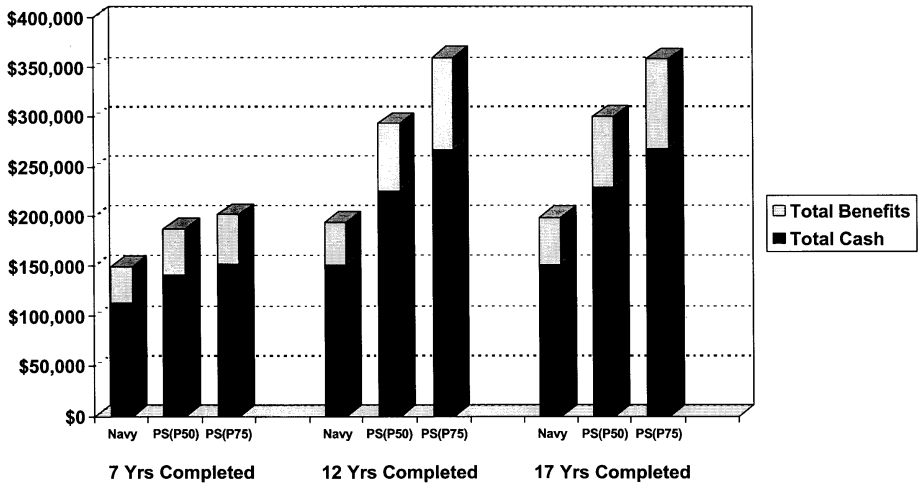
Years of Completed Navy Service	Compensation Element	Navy Service	+Second Career =	Total Navy Service	Private Sector (75th Percentile)
17	RMC/Base Salary	$273,900	$3,900,900	$4,174,800	$4,755,900
	Incentive Pays	$187,400		$187,400	
	Total Cash	$461,300	$3,900,900	$4,362,200	$4,755,900
	Retirement + SBP	$674,000	$568,800	$1,242,800	$660,400
	Other Benefits	$76,100	$766,800	$842,900	$933,200
	Total Benefits	$750,100	$1,335,600	$2,085,700	$1,593,600
	Total Compensation	$1,211,400	$5,236,500	$6,447,900	$6,349,500

Navy compensation is RMC, special and incentive pays, and benefits as of 1 July 2000.

Private Sector compensation is total salary (including base and incentives) and benefits as of 1 July 2000. At 7 years of completed service, private sector compensation assumes completion of cardiology specialty training following same schedule as in Navy practice. At 17 years of completed service, private sector assumes cardiology specialty.

Cardiology (Invasive)

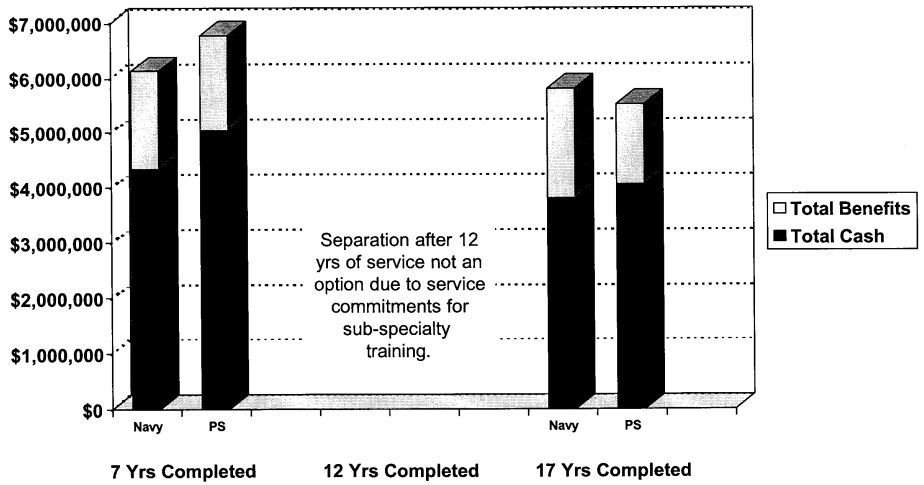
Current Annual Compensation



Cardiology (Invasive)

Present Value of Future Compensation & Benefits

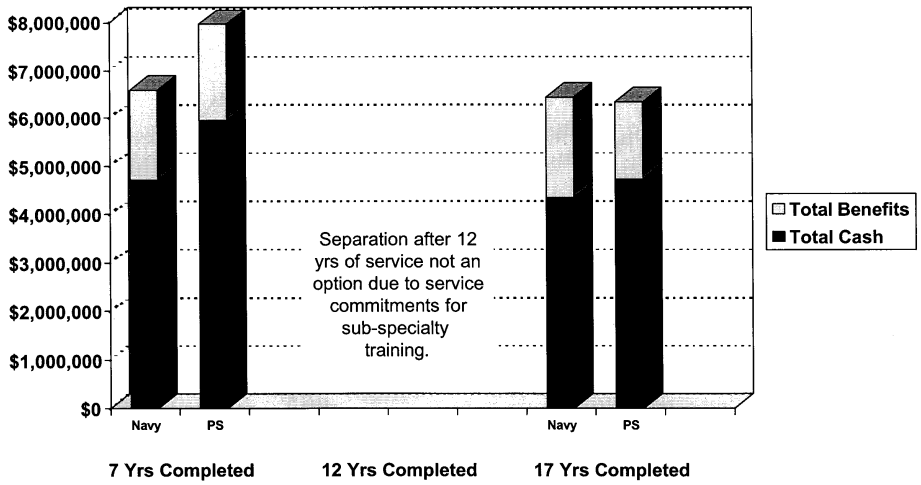
(Median Private Sector Salaries)



Cardiology (Invasive)

Present Value of Future Compensation & Benefits

(P75 Private Sector Salaries)



Dermatology

Current Annual Compensation

Years of Completed Navy Service	Compensation Element	Navy	Private Sector (50th Percentile)	Private Sector (75th Percentile)
7	RMC/Base Salary	$63,300	$174,000	$188,000
	Incentive Pays	$43,000		
	Total Cash	$106,300	$174,000	$188,000
	Total Benefits	$36,000	$59,600	$64,400
	Total Compensation	$142,300	$233,600	$252,400

Years of Completed Navy Service	Compensation Element	Navy	Private Sector (50th Percentile)	Private Sector (75th Percentile)
12	RMC/Base Salary	$77,600	$182,700	$199,800
	Incentive Pays	$51,000		
	Total Cash	$128,600	$182,700	$199,800
	Total Benefits	$42,900	$62,400	$67,200
	Total Compensation	$171,500	$245,100	$267,000

Years of Completed Navy Service	Compensation Element	Navy	Private Sector (50th Percentile)	Private Sector (75th Percentile)
17	RMC/Base Salary	$86,100	$191,400	$211,700
	Incentive Pays	$50,000		
	Total Cash	$136,100	$191,400	$211,700
	Total Benefits	$47,400	$65,300	$69,900
	Total Compensation	$183,500	$256,700	$281,600

Navy compensation is RMC, special and incentive pays, and benefits as of 1 July 2000

Private Sector compensation is total salary (including base and incentives) and benefits as of 1 July 2000

Dermatology

Present Value of Future Compensation and Benefits

Median Private Sector Salaries

Years of Completed Navy Service	Compensation Element	Navy Service	+ Second Career =	Total Navy Service	Private Sector (50th Percentile)
7	RMC/Base Salary Incentive Pays				
Separation after 7 yrs of service not an option due to service commitments for residency training.	Total Cash				
	Retirement + SBP Other Benefits				
	Total Benefits				
	Total Compensation			**N/A**	**N/A**

Years of Completed Navy Service	Compensation Element	Navy Service	+ Second Career =	Total Navy Service	Private Sector (50th Percentile)
12	RMC/Base Salary Incentive Pays	$628,100 $347,700	$2,506,200	$3,134,300 $347,700	$3,848,900
	Total Cash	$975,800	$2,506,200	$3,482,000	$3,848,900
	Retirement + SBP Other Benefits	$550,800 $179,200	$483,100 $564,200	$1,033,900 $743,400	$691,000 $788,500
	Total Benefits	$730,000	$1,047,300	$1,777,300	$1,479,500
	Total Compensation	$1,705,800	$3,553,500	$5,259,300	$5,328,400

Years of Completed Navy Service	Compensation Element	Navy Service	+ Second Career =	Total Navy Service	Private Sector (50th Percentile)
17	RMC/Base Salary Incentive Pays	$273,900 $137,700	$2,844,900	$3,118,800 $137,700	$3,395,300
	Total Cash	$411,600	$2,844,900	$3,256,500	$3,395,300
	Retirement + SBP Other Benefits	$674,000 $76,100	$546,900 $595,000	$1,220,900 $671,100	$634,700 $689,700
	Total Benefits	$750,100	$1,141,900	$1,892,000	$1,324,400
	Total Compensation	$1,161,700	$3,986,800	$5,148,500	$4,719,700

Navy compensation is RMC, special and incentive pays, and benefits as of 1 July 2000

Private Sector compensation is total salary (including base and incentives) and benefits as of 1 July 2000

Dermatology

Present Value of Future Compensation and Benefits

P75 Private Sector Salaries

Years of Completed Navy Service	Compensation Element	Navy Service	+ Second Career =	Total Navy Service	Private Sector (75th Percentile)
7	RMC/Base Salary				
	Incentive Pays				
Separation after 7 yrs of service not an option due to service commitments for residency training.	Total Cash				
	Retirement + SBP				
	Other Benefits				
	Total Benefits				
	Total Compensation			**N/A**	**N/A**

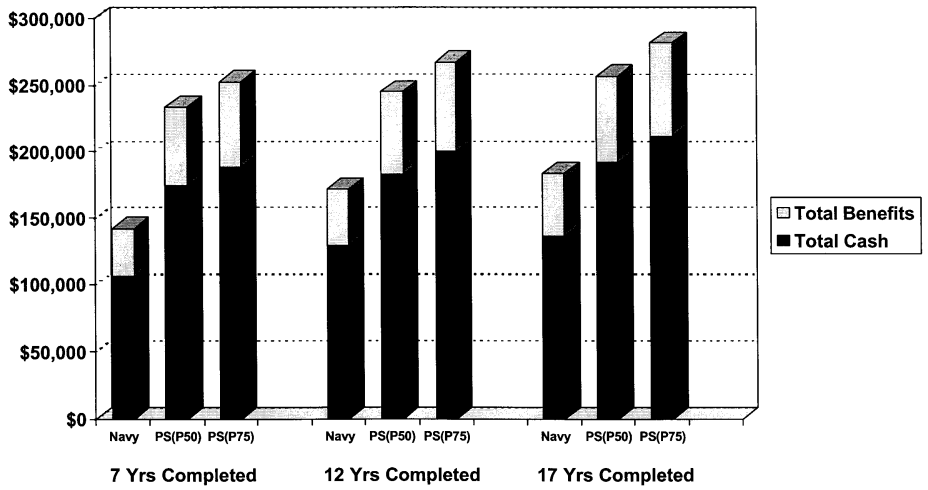
Years of Completed Navy Service	Compensation Element	Navy Service	+ Second Career =	Total Navy Service	Private Sector (75th Percentile)
12	RMC/Base Salary	$628,100	$2,780,700	$3,408,800	$4,210,800
	Incentive Pays	$347,700		$347,700	
	Total Cash	$975,800	$2,780,700	$3,756,500	$4,210,800
	Retirement + SBP	$550,800	$509,900	$1,060,700	$729,100
	Other Benefits	$179,200	$597,300	$776,500	$844,000
	Total Benefits	$730,000	$1,107,200	$1,837,200	$1,573,100
	Total Compensation	$1,705,800	$3,887,900	$5,593,700	$5,783,900

Years of Completed Navy Service	Compensation Element	Navy Service	+ Second Career =	Total Navy Service	Private Sector (75th Percentile)
17	RMC/Base Salary	$273,900	$3,163,300	$3,437,200	$3,756,400
	Incentive Pays	$137,700		$137,700	
	Total Cash	$411,600	$3,163,300	$3,574,900	$3,756,400
	Retirement + SBP	$674,000	$577,100	$1,251,100	$669,700
	Other Benefits	$76,100	$632,000	$708,100	$735,400
	Total Benefits	$750,100	$1,209,100	$1,959,200	$1,405,100
	Total Compensation	$1,161,700	$4,372,400	$5,534,100	$5,161,500

Navy compensation is RMC, special and incentive pays, and benefits as of 1 July 2000

Private Sector compensation is total salary (including base and incentives) and benefits as of 1 July 2000

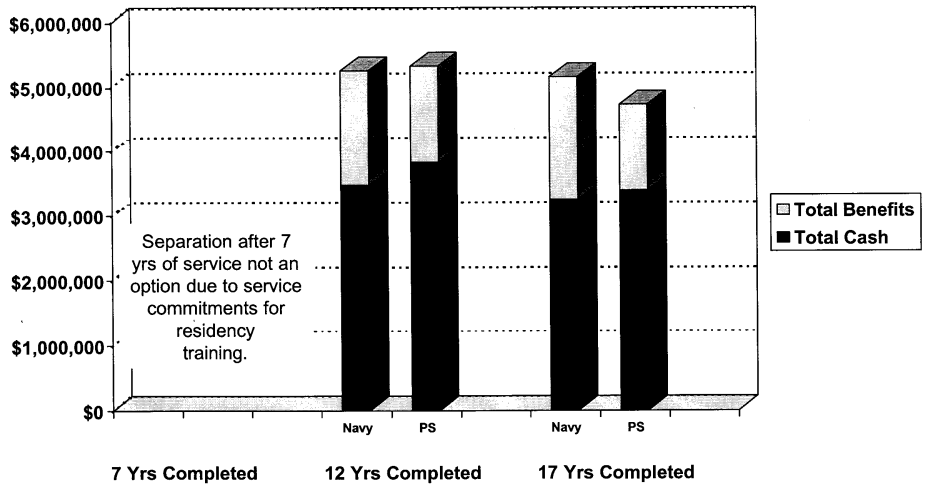
Dermatology
Current Annual Compensation



Dermatology

Present Value of Future Compensation & Benefits

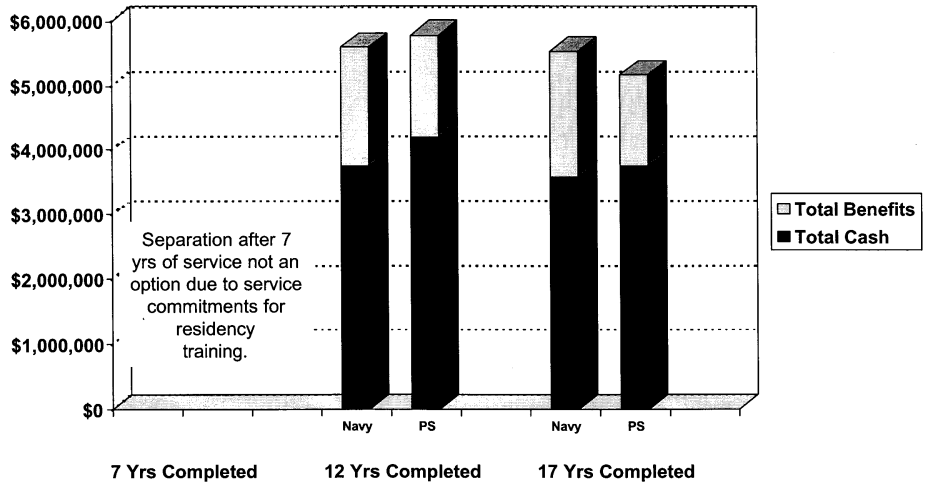
(Median Private Sector Salaries)



Dermatology

Present Value of Future Compensation & Benefits

(P75 Private Sector Salaries)



Emergency Medicine

Current Annual Compensation

Years of Completed Navy Service	Compensation Element	Navy	Private Sector (50th Percentile)	Private Sector (75th Percentile)
7	RMC/Base Salary	$63,300	$178,100	$192,000
	Incentive Pays	$51,000		
	Total Cash	$114,300	$178,100	$192,000
	Total Benefits	$36,000	$58,900	$61,700
	Total Compensation	$150,300	$237,000	$253,700

Years of Completed Navy Service	Compensation Element	Navy	Private Sector (50th Percentile)	Private Sector (75th Percentile)
12	RMC/Base Salary	$77,600	$186,100	$203,500
	Incentive Pays	$59,000		
	Total Cash	$136,600	$186,100	$203,500
	Total Benefits	$42,900	$61,700	$65,900
	Total Compensation	$179,500	$247,800	$269,400

Years of Completed Navy Service	Compensation Element	Navy	Private Sector (50th Percentile)	Private Sector (75th Percentile)
17	RMC/Base Salary	$86,100	$194,100	$215,100
	Incentive Pays	$58,000		
	Total Cash	$144,100	$194,100	$215,100
	Total Benefits	$47,400	$64,400	$70,100
	Total Compensation	$191,500	$258,500	$285,200

Navy compensation is RMC, special and incentive pays, and benefits as of 1 July 2000

Private Sector compensation is total salary (including base and incentives) and benefits as of 1 July 2000

Emergency Medicine

Present Value of Future Compensation and Benefits

Median Private Sector Salaries

Years of Completed Navy Service	Compensation Element	Navy Service	+ Second Career =	Total Navy Service	Private Sector (50th Percentile)
7	RMC/Base Salary Incentive Pays				
Separation after 7 yrs of service not an option due to service commitments for residency training.	Total Cash				
	Retirement + SBP Other Benefits				
	Total Benefits				
	Total Compensation			**N/A**	**N/A**

Years of Completed Navy Service	Compensation Element	Navy Service	+ Second Career =	Total Navy Service	Private Sector (50th Percentile)
12	RMC/Base Salary Incentive Pays	$628,100 $403,600	$2,538,900	$3,167,000 $403,600	$3,921,900
	Total Cash	$1,031,700	$2,538,900	$3,570,600	$3,921,900
	Retirement + SBP Other Benefits	$550,800 $179,200	$475,400 $558,200	$1,026,200 $737,400	$680,100 $779,500
	Total Benefits	$730,000	$1,033,600	$1,763,600	$1,459,600
	Total Compensation	$1,761,700	$3,572,500	$5,334,200	$5,381,500

Years of Completed Navy Service	Compensation Element	Navy Service	+ Second Career =	Total Navy Service	Private Sector (50th Percentile)
17	RMC/Base Salary Incentive Pays	$273,900 $160,700	$2,879,900	$3,153,800 $160,700	$3,444,200
	Total Cash	$434,600	$2,879,900	$3,314,500	$3,444,200
	Retirement + SBP Other Benefits	$674,000 $76,100	$538,300 $588,000	$1,212,300 $664,100	$624,600 $681,500
	Total Benefits	$750,100	$1,126,300	$1,876,400	$1,306,100
	Total Compensation	$1,184,700	$4,006,200	$5,190,900	$4,750,300

Navy compensation is RMC, special and incentive pays, and benefits as of 1 July 2000

Private Sector compensation is total salary (including base and incentives) and benefits as of 1 July 2000

Emergency Medicine

Present Value of Future Compensation and Benefits

P75 Private Sector Salaries

Years of Completed Navy Service	Compensation Element	Navy Service	+ Second Career =	Total Navy Service	Private Sector (75th Percentile)
7	RMC/Base Salary Incentive Pays				
Separation after 7 yrs of service not an option due to service commitments for residency training.	Total Cash				
	Retirement + SBP Other Benefits				
	Total Benefits				
	Total Compensation			**N/A**	**N/A**

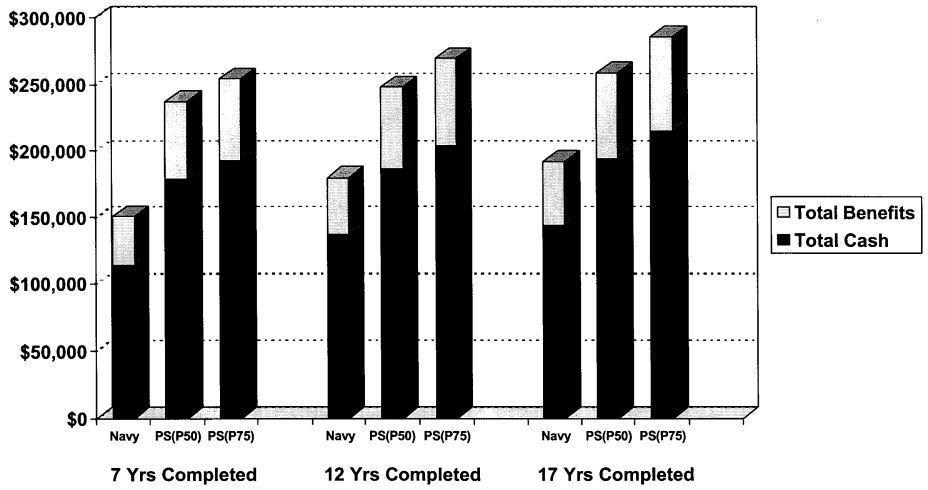
Years of Completed Navy Service	Compensation Element	Navy Service	+ Second Career =	Total Navy Service	Private Sector (75th Percentile)
12	RMC/Base Salary Incentive Pays	$628,100 $403,600	$2,823,200	$3,451,300 $403,600	$4,288,800
	Total Cash	$1,031,700	$2,823,200	$3,854,900	$4,288,800
	Retirement + SBP Other Benefits	$550,800 $179,200	$543,800 $601,400	$1,094,600 $780,600	$777,000 $829,500
	Total Benefits	$730,000	$1,145,200	$1,875,200	$1,606,500
	Total Compensation	$1,761,700	$3,968,400	$5,730,100	$5,895,300

Years of Completed Navy Service	Compensation Element	Navy Service	+ Second Career =	Total Navy Service	Private Sector (75th Percentile)
17	RMC/Base Salary Incentive Pays	$273,900 $160,700	$3,209,900	$3,483,800 $160,700	$3,816,100
	Total Cash	$434,600	$3,209,900	$3,644,500	$3,816,100
	Retirement + SBP Other Benefits	$674,000 $76,100	$616,200 $639,200	$1,290,200 $715,300	$714,800 $737,300
	Total Benefits	$750,100	$1,255,400	$2,005,500	$1,452,100
	Total Compensation	$1,184,700	$4,465,300	$5,650,000	$5,268,200

Navy compensation is RMC, special and incentive pays, and benefits as of 1 July 2000

Private Sector compensation is total salary (including base and incentives) and benefits as of 1 July 2000

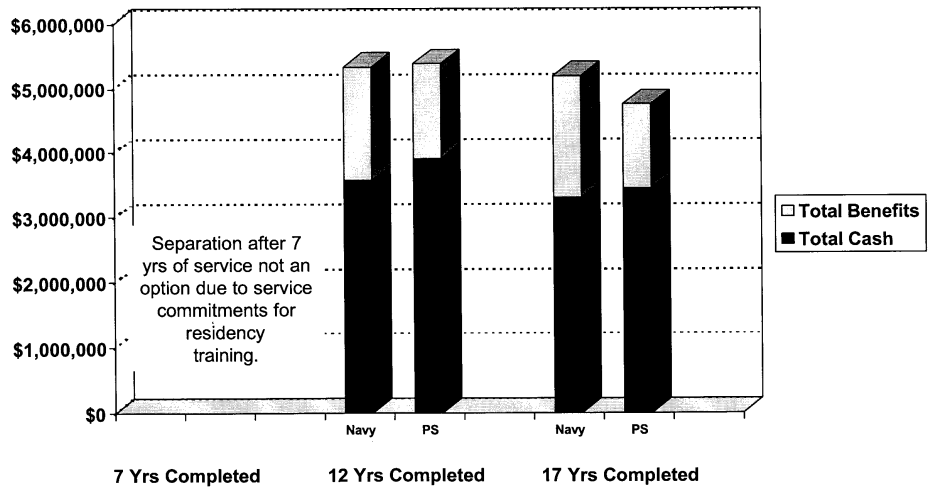
Emergency Medicine
Current Annual Compensation



Emergency Medicine

Present Value of Future Compensation & Benefits

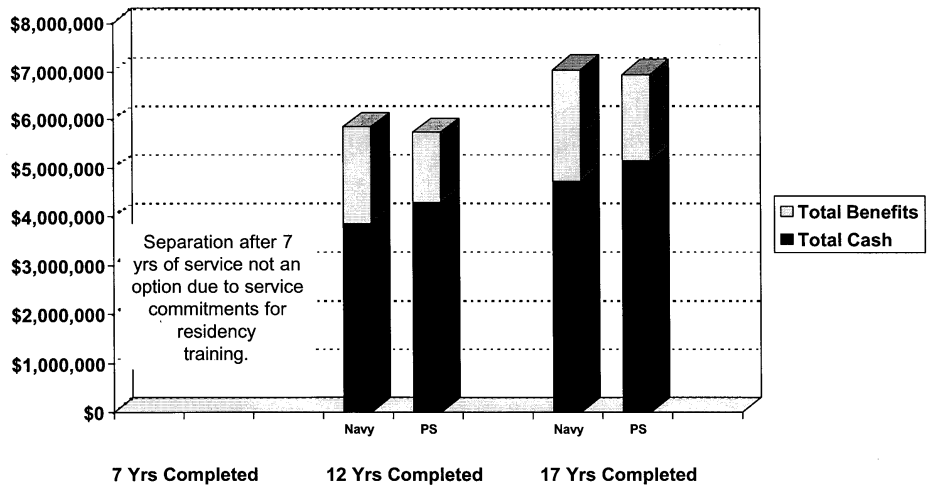
(Median Private Sector Salaries)



Emergency Medicine

Present Value of Future Compensation & Benefits

(P75 Private Sector Salaries)



Family Practice

Current Annual Compensation

Years of Completed Navy Service	Compensation Element	Navy	Private Sector (50th Percentile)	Private Sector (75th Percentile)
7	RMC/Base Salary	$63,300	$131,800	$152,300
	Incentive Pays	$56,000		
	Total Cash	$119,300	$131,800	$152,300
	Total Benefits	$36,000	$44,900	$49,000
	Total Compensation	$155,300	$176,700	$201,300

Years of Completed Navy Service	Compensation Element	Navy	Private Sector (50th Percentile)	Private Sector (75th Percentile)
12	RMC/Base Salary	$77,600	$134,800	$158,300
	Incentive Pays	$56,000		
	Total Cash	$133,600	$134,800	$158,300
	Total Benefits	$42,900	$45,600	$50,600
	Total Compensation	$176,500	$180,400	$208,900

Years of Completed Navy Service	Compensation Element	Navy	Private Sector (50th Percentile)	Private Sector (75th Percentile)
17	RMC/Base Salary	$86,100	$137,900	$164,300
	Incentive Pays	$52,000		
	Total Cash	$138,100	$137,900	$164,300
	Total Benefits	$47,400	$46,400	$52,100
	Total Compensation	$185,500	$184,300	$216,400

Navy compensation is RMC, special and incentive pays, and benefits as of 1 July 2000

Private Sector compensation is total salary (including base and incentives) and benefits as of 1 July 2000

Family Practice

Present Value of Future Compensation and Benefits

Median Private Sector Salaries

Years of Completed Navy Service	Compensation Element	Navy Service	+Second Career =	Total Navy Service	Private Sector (50th Percentile)
7	RMC/Base Salary	$1,330,200	$1,519,600	$2,849,800	$2,973,800
	Incentive Pays	$546,000		$546,000	
	Total Cash	$1,876,200	$1,519,600	$3,395,800	$2,973,800
	Retirement + SBP	$488,300	$258,500	$746,800	$443,300
	Other Benefits	$244,000	$415,800	$659,800	$636,800
	Total Benefits	$732,300	$674,300	$1,406,600	$1,080,100
	Total Compensation	$2,608,500	$2,193,900	$4,802,400	$4,053,900

Years of Completed Navy Service	Compensation Element	Navy Service	+Second Career =	Total Navy Service	Private Sector (50th Percentile)
12	RMC/Base Salary	$628,100	$1,719,300	$2,347,400	$2,682,600
	Incentive Pays	$373,200		$373,200	
	Total Cash	$1,001,300	$1,719,300	$2,720,600	$2,682,600
	Retirement + SBP	$550,800	$292,200	$843,000	$419,600
	Other Benefits	$179,200	$411,500	$590,700	$565,500
	Total Benefits	$730,000	$703,700	$1,433,700	$985,100
	Total Compensation	$1,731,300	$2,423,000	$4,154,300	$3,667,700

Years of Completed Navy Service	Compensation Element	Navy Service	+Second Career =	Total Navy Service	Private Sector (50th Percentile)
17	RMC/Base Salary	$273,900	$1,944,900	$2,218,800	$2,333,800
	Incentive Pays	$148,000		$148,000	
	Total Cash	$421,900	$1,944,900	$2,366,800	$2,333,800
	Retirement + SBP	$674,000	$330,200	$1,004,200	$383,800
	Other Benefits	$76,100	$420,100	$496,200	$484,500
	Total Benefits	$750,100	$750,300	$1,500,400	$868,300
	Total Compensation	$1,172,000	$2,695,200	$3,867,200	$3,202,100

Navy compensation is RMC, special and incentive pays, and benefits as of 1 July 2000

Private Sector compensation is total salary (including base and incentives) and benefits as of 1 July 2000

Family Practice

Present Value of Future Compensation and Benefits

P75 Private Sector Salaries

Years of Completed Navy Service	Compensation Element	Navy Service	+Second Career =	Total Navy Service	Private Sector (75th Percentile)
7	RMC/Base Salary	$1,330,200	$1,817,400	$3,147,600	$3,434,900
	Incentive Pays	$546,000		$546,000	
	Total Cash	$1,876,200	$1,817,400	$3,693,600	$3,434,900
	Retirement + SBP	$488,300	$307,500	$795,800	$525,600
	Other Benefits	$244,000	$452,000	$696,000	$688,100
	Total Benefits	$732,300	$759,500	$1,491,800	$1,213,700
	Total Compensation	$2,608,500	$2,576,900	$5,185,400	$4,648,600

Years of Completed Navy Service	Compensation Element	Navy Service	+Second Career =	Total Navy Service	Private Sector (75th Percentile)
12	RMC/Base Salary	$628,100	$2,060,700	$2,688,800	$3,149,100
	Incentive Pays	$373,200		$373,200	
	Total Cash	$1,001,300	$2,060,700	$3,062,000	$3,149,100
	Retirement + SBP	$550,800	$347,800	$898,600	$498,500
	Other Benefits	$179,200	$453,000	$632,200	$619,700
	Total Benefits	$730,000	$800,800	$1,530,800	$1,118,200
	Total Compensation	$1,731,300	$2,861,500	$4,592,800	$4,267,300

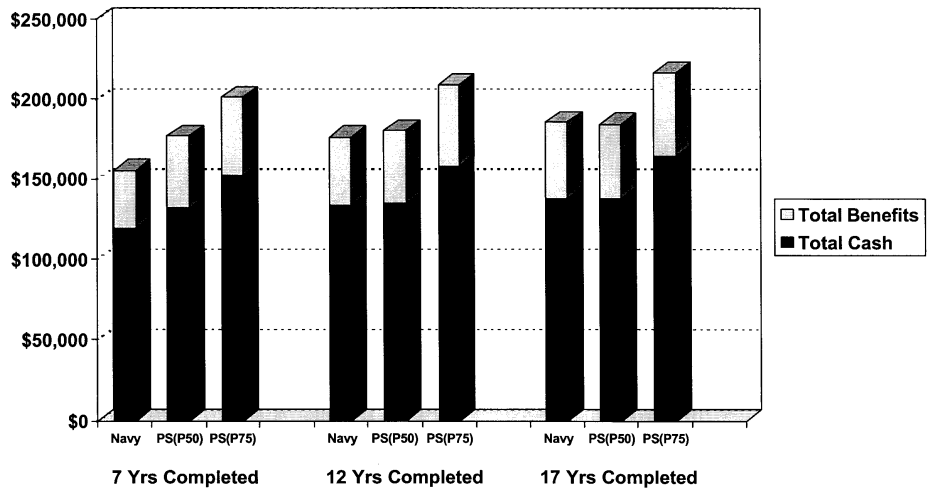
Years of Completed Navy Service	Compensation Element	Navy Service	+Second Career =	Total Navy Service	Private Sector (75th Percentile)
17	RMC/Base Salary	$273,900	$2,335,700	$2,609,600	$2,781,600
	Incentive Pays	$148,000		$148,000	
	Total Cash	$421,900	$2,335,700	$2,757,600	$2,781,600
	Retirement + SBP	$674,000	$393,400	$1,067,400	$456,800
	Other Benefits	$76,100	$467,800	$543,900	$538,400
	Total Benefits	$750,100	$861,200	$1,611,300	$995,200
	Total Compensation	$1,172,000	$3,196,900	$4,368,900	$3,776,800

Navy compensation is RMC, special and incentive pays, and benefits as of 1 July 2000

Private Sector compensation is total salary (including base and incentives) and benefits as of 1 July 2000

Family Practice

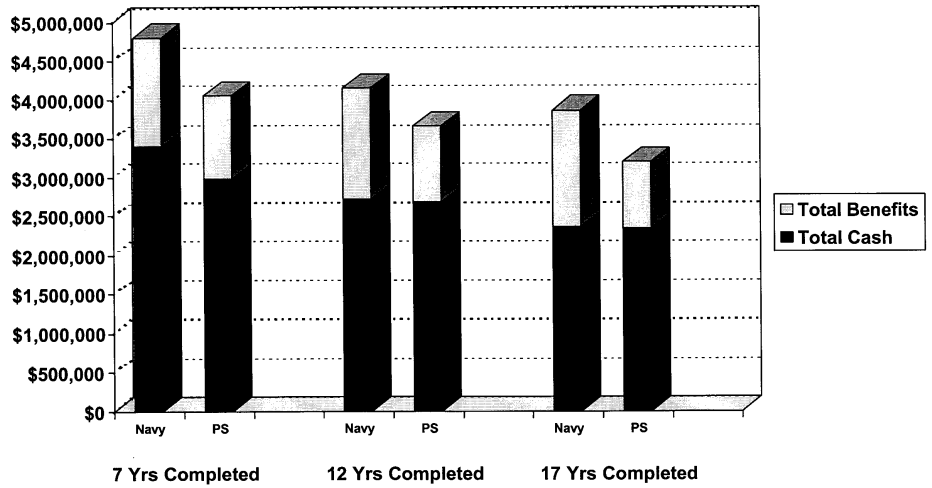
Current Annual Compensation



Family Practice

Present Value of Future Compensation & Benefits

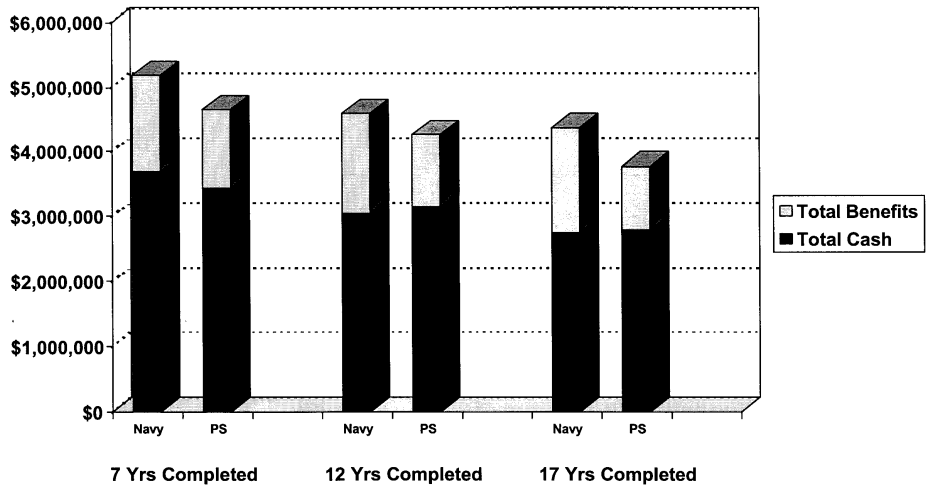
(Median Private Sector Salaries)



Family Practice

Present Value of Future Compensation & Benefits

(P75 Private Sector Salaries)



Gastroenterology

Current Annual Compensation

Years of Completed Navy Service	Compensation Element	Navy	Private Sector (50th Percentile)	Private Sector (75th Percentile)
7	RMC/Base Salary	$63,300	$140,300	$152,500
	Incentive Pays	$50,000		
	Total Cash	$113,300	$140,300	$152,500
	Total Benefits	$36,000	$47,100	$49,300
	Total Compensation	$149,300	$187,400	$201,800

Years of Completed Navy Service	Compensation Element	Navy	Private Sector (50th Percentile)	Private Sector (75th Percentile)
12	RMC/Base Salary	$77,600	$190,800	$218,900
	Incentive Pays	$60,000		
	Total Cash	$137,600	$190,800	$218,900
	Total Benefits	$42,900	$59,500	$70,500
	Total Compensation	$180,500	$250,300	$289,400

Years of Completed Navy Service	Compensation Element	Navy	Private Sector (50th Percentile)	Private Sector (75th Percentile)
17	RMC/Base Salary	$86,100	$194,800	$222,300
	Incentive Pays	$52,000		
	Total Cash	$138,100	$194,800	$222,300
	Total Benefits	$47,400	$61,800	$72,900
	Total Compensation	$185,500	$256,600	$295,200

Navy compensation is RMC, special and incentive pays, and benefits as of 1 July 2000

Private Sector compensation is total salary (including base and incentives) and benefits as of 1 July 2000. At 7 years of completed service, private sector compensation is for internal medicine. At 12 and 17 years of completed service, private sector compensation is for gastroenterology.

Gastroenterology

Present Value of Future Compensation and Benefits

Median Private Sector Salaries

Years of Completed Navy Service	Compensation Element	Navy Service	+ Second Career =	Total Navy Service	Private Sector (50th Percentile)
7	RMC/Base Salary	$1,330,200	$1,972,000	$3,302,200	$4,280,000
	Incentive Pays	$574,500		$574,500	
	Total Cash	$1,904,700	$1,972,000	$3,876,700	$4,280,000
	Retirement + SBP	$488,300	$393,100	$881,400	$668,300
	Other Benefits	$244,000	$525,000	$769,000	$814,400
	Total Benefits	$732,300	$918,100	$1,650,400	$1,482,700
	Total Compensation	$2,637,000	$2,890,100	$5,527,100	$5,762,700

Years of Completed Navy Service	Compensation Element	Navy Service	+ Second Career =	Total Navy Service	Private Sector (50th Percentile)
12	RMC/Base Salary				
	Incentive Pays				
Separation after 12 yrs of service not an option due to service commitments for sub-specialty training.	Total Cash				
	Retirement + SBP				
	Other Benefits				
	Total Benefits				
	Total Compensation			**N/A**	**N/A**

Years of Completed Navy Service	Compensation Element	Navy Service	+ Second Career =	Total Navy Service	Private Sector (50th Percentile)
17	RMC/Base Salary	$273,900	$2,834,000	$3,107,900	$3,420,800
	Incentive Pays	$149,900		$149,900	
	Total Cash	$423,800	$2,834,000	$3,257,800	$3,420,800
	Retirement + SBP	$674,000	$502,700	$1,176,700	$583,600
	Other Benefits	$76,100	$560,700	$636,800	$649,800
	Total Benefits	$750,100	$1,063,400	$1,813,500	$1,233,400
	Total Compensation	$1,173,900	$3,897,400	$5,071,300	$4,654,200

Navy compensation is RMC, special and incentive pays, and benefits as of 1 July 2000.

Private Sector compensation is total salary (including base and incentives) and benefits as of 1 July 2000. At 7 years of completed service, private sector compensation assumes completion of gastroenterology specialty training following same schedule as in Navy practice. At 17 years of completed service, private sector assumes gastroenterology specialty.

Gastroenterology

Present Value of Future Compensation and Benefits

P75 Private Sector Salaries

Years of Completed Navy Service	Compensation Element	Navy Service	+ Second Career =	Total Navy Service	Private Sector (75th Percentile)
7	RMC/Base Salary	$1,330,200	$2,246,500	$3,576,700	$4,893,100
	Incentive Pays	$574,500		$574,500	
	Total Cash	$1,904,700	$2,246,500	$4,151,200	$4,893,100
	Retirement + SBP	$488,300	$457,700	$946,000	$776,400
	Other Benefits	$244,000	$594,900	$838,900	$942,000
	Total Benefits	$732,300	$1,052,600	$1,784,900	$1,718,400
	Total Compensation	$2,637,000	$3,299,100	$5,936,100	$6,611,500

Years of Completed Navy Service	Compensation Element	Navy Service	+ Second Career =	Total Navy Service	Private Sector (75th Percentile)
12	RMC/Base Salary				
	Incentive Pays				
Separation after 12 yrs of service not an option due to service commitments for sub-specialty training.	Total Cash				
	Retirement + SBP				
	Other Benefits				
	Total Benefits				
	Total Compensation			**N/A**	**N/A**

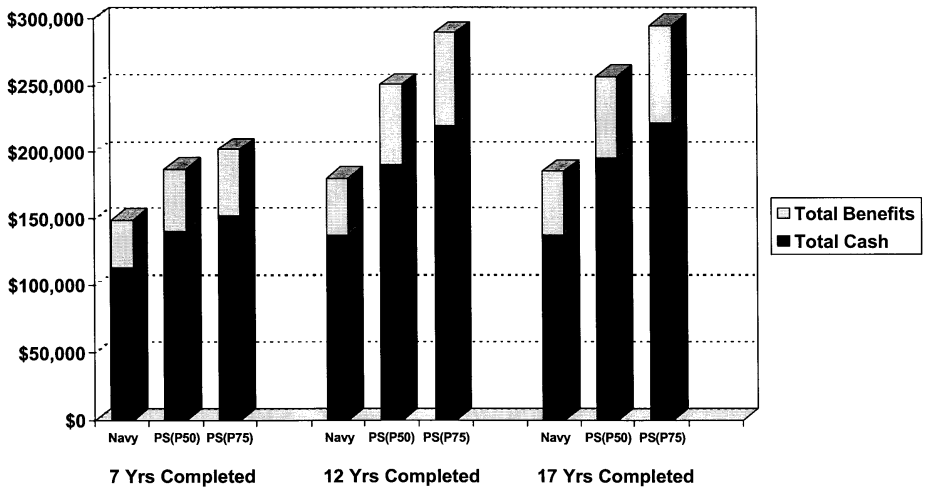
Years of Completed Navy Service	Compensation Element	Navy Service	+ Second Career =	Total Navy Service	Private Sector (75th Percentile)
17	RMC/Base Salary	$273,900	$3,226,900	$3,500,800	$3,904,900
	Incentive Pays	$149,900		$149,900	
	Total Cash	$423,800	$3,226,900	$3,650,700	$3,904,900
	Retirement + SBP	$674,000	$585,100	$1,259,100	$678,900
	Other Benefits	$76,100	$649,800	$725,900	$757,900
	Total Benefits	$750,100	$1,234,900	$1,985,000	$1,436,800
	Total Compensation	$1,173,900	$4,461,800	$5,635,700	$5,341,700

Navy compensation is RMC, special and incentive pays, and benefits as of 1 July 2000.

Private Sector compensation is total salary (including base and incentives) and benefits as of 1 July 2000. At 7 years of completed service, private sector compensation assumes completion of gastroenterology specialty training following same schedule as in Navy practice. At 17 years of completed service, private sector assumes gastroenterology specialty.

Gastroenterology

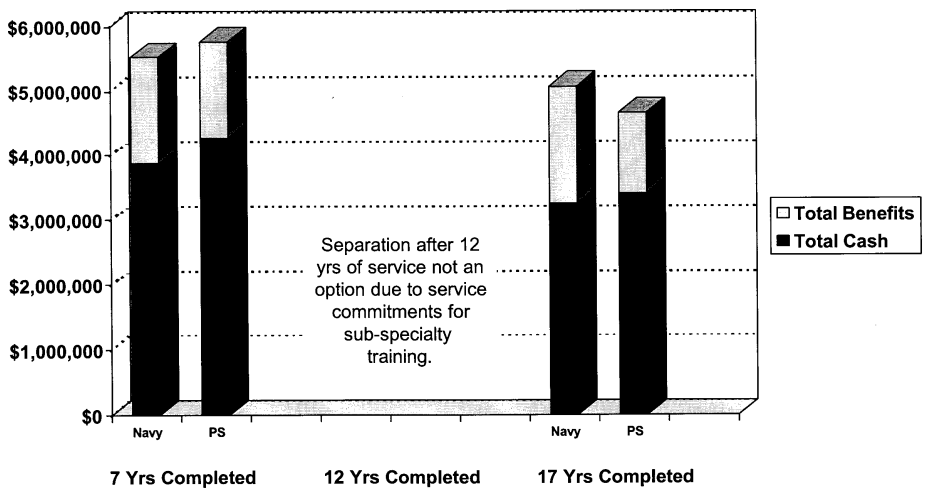
Current Annual Compensation



Gastroenterology

Present Value of Future Compensation & Benefits

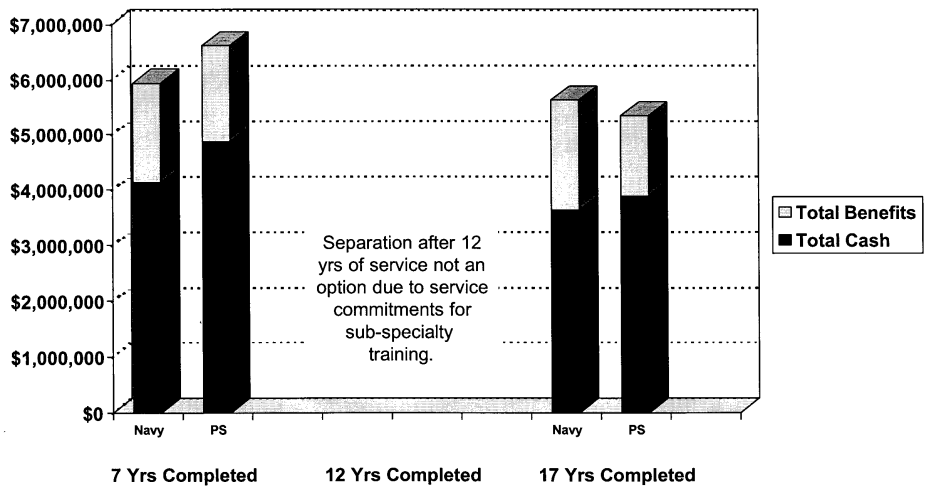
(Median Private Sector Salaries)



Gastroenterology

Present Value of Future Compensation & Benefits

(P75 Private Sector Salaries)



General Surgery

Current Annual Compensation

Years of Completed Navy Service	Compensation Element	Navy	Private Sector (50th Percentile)	Private Sector (75th Percentile)
7	RMC/Base Salary	$63,300	$179,100	$217,400
	Incentive Pays	$52,500		
	Total Cash	$115,800	$179,100	$217,400
	Total Benefits	$36,000	$53,400	$67,100
	Total Compensation	$151,800	$232,500	$284,500

Years of Completed Navy Service	Compensation Element	Navy	Private Sector (50th Percentile)	Private Sector (75th Percentile)
12	RMC/Base Salary	$77,600	$193,200	$231,000
	Incentive Pays	$65,000		
	Total Cash	$142,600	$193,200	$231,000
	Total Benefits	$42,900	$57,500	$70,700
	Total Compensation	$185,500	$250,700	$301,700

Years of Completed Navy Service	Compensation Element	Navy	Private Sector (50th Percentile)	Private Sector (75th Percentile)
17	RMC/Base Salary	$86,100	$207,300	$244,500
	Incentive Pays	$55,000		
	Total Cash	$141,100	$207,300	$244,500
	Total Benefits	$47,400	$61,700	$74,300
	Total Compensation	$188,500	$269,000	$318,800

Navy compensation is RMC, special and incentive pays, and benefits as of 1 July 2000

Private Sector compensation is total salary (including base and incentives) and benefits as of 1 July 2000

General Surgery

Present Value of Future Compensation and Benefits

Median Private Sector Salaries

Years of Completed Navy Service	Compensation Element	Navy Service	+ Second Career =	Total Navy Service	Private Sector (50th Percentile)
7	RMC/Base Salary				
	Incentive Pays				
Separation after 7 yrs of service not an option due to service commitments for residency training.	Total Cash				
	Retirement + SBP				
	Other Benefits				
	Total Benefits				
	Total Compensation			N/A	N/A

Years of Completed Navy Service	Compensation Element	Navy Service	+ Second Career =	Total Navy Service	Private Sector (50th Percentile)
12	RMC/Base Salary	$628,100	$2,835,000	$3,463,100	$4,293,600
	Incentive Pays	$428,700		$428,700	
	Total Cash	$1,056,800	$2,835,000	$3,891,800	$4,293,600
	Retirement + SBP	$550,800	$489,900	$1,040,700	$699,000
	Other Benefits	$179,200	$556,700	$735,900	$765,000
	Total Benefits	$730,000	$1,046,600	$1,776,600	$1,464,000
	Total Compensation	$1,786,800	$3,881,600	$5,668,400	$5,757,600

Years of Completed Navy Service	Compensation Element	Navy Service	+ Second Career =	Total Navy Service	Private Sector (50th Percentile)
17	RMC/Base Salary	$273,900	$3,234,000	$3,507,900	$3,842,200
	Incentive Pays	$158,500		$158,500	
	Total Cash	$432,400	$3,234,000	$3,666,400	$3,842,200
	Retirement + SBP	$674,000	$555,700	$1,229,700	$644,300
	Other Benefits	$76,100	$589,300	$665,400	$679,500
	Total Benefits	$750,100	$1,145,000	$1,895,100	$1,323,800
	Total Compensation	$1,182,500	$4,379,000	$5,561,500	$5,166,000

Navy compensation is RMC, special and incentive pays, and benefits as of 1 July 2000

Private Sector compensation is total salary (including base and incentives) and benefits as of 1 July 2000

General Surgery

Present Value of Future Compensation and Benefits

P75 Private Sector Salaries

Years of Completed Navy Service	Compensation Element	Navy Service	+ Second Career =	Total Navy Service	Private Sector (75th Percentile)
7	RMC/Base Salary				
	Incentive Pays				
Separation after 7 yrs of service not an option due to service commitments for residency training.	Total Cash				
	Retirement + SBP				
	Other Benefits				
	Total Benefits				
	Total Compensation			**N/A**	**N/A**

Years of Completed Navy Service	Compensation Element	Navy Service	+ Second Career =	Total Navy Service	Private Sector (75th Percentile)
12	RMC/Base Salary	$628,100	$3,333,500	$3,961,600	$5,132,300
	Incentive Pays	$428,700		$428,700	
	Total Cash	$1,056,800	$3,333,500	$4,390,300	$5,132,300
	Retirement + SBP	$550,800	$556,200	$1,107,000	$793,000
	Other Benefits	$179,200	$649,700	$828,900	$927,500
	Total Benefits	$730,000	$1,205,900	$1,935,900	$1,720,500
	Total Compensation	$1,786,800	$4,539,400	$6,326,200	$6,852,800

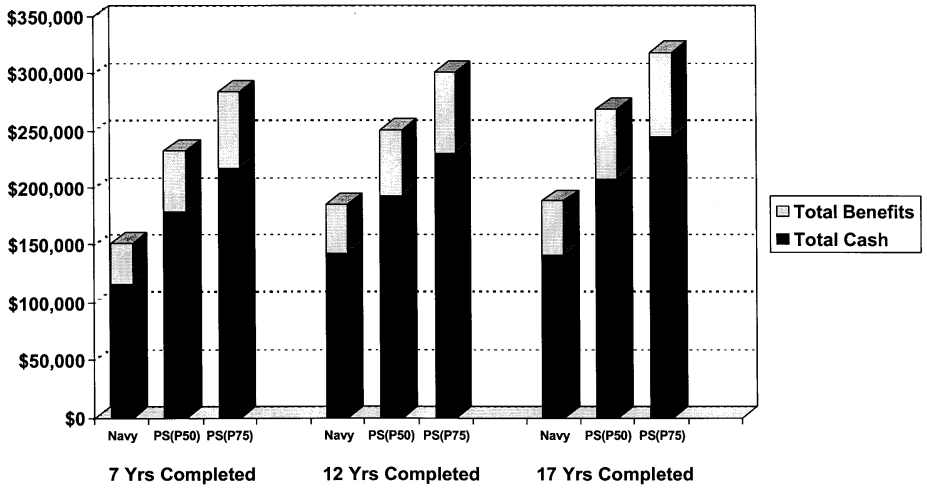
Years of Completed Navy Service	Compensation Element	Navy Service	+ Second Career =	Total Navy Service	Private Sector (75th Percentile)
17	RMC/Base Salary	$273,900	$3,791,600	$4,065,500	$4,530,800
	Incentive Pays	$158,500		$158,500	
	Total Cash	$432,400	$3,791,600	$4,224,000	$4,530,800
	Retirement + SBP	$674,000	$630,000	$1,304,000	$730,300
	Other Benefits	$76,100	$692,500	$768,600	$808,900
	Total Benefits	$750,100	$1,322,500	$2,072,600	$1,539,200
	Total Compensation	$1,182,500	$5,114,100	$6,296,600	$6,070,000

Navy compensation is RMC, special and incentive pays, and benefits as of 1 July 2000

Private Sector compensation is total salary (including base and incentives) and benefits as of 1 July 2000

General Surgery

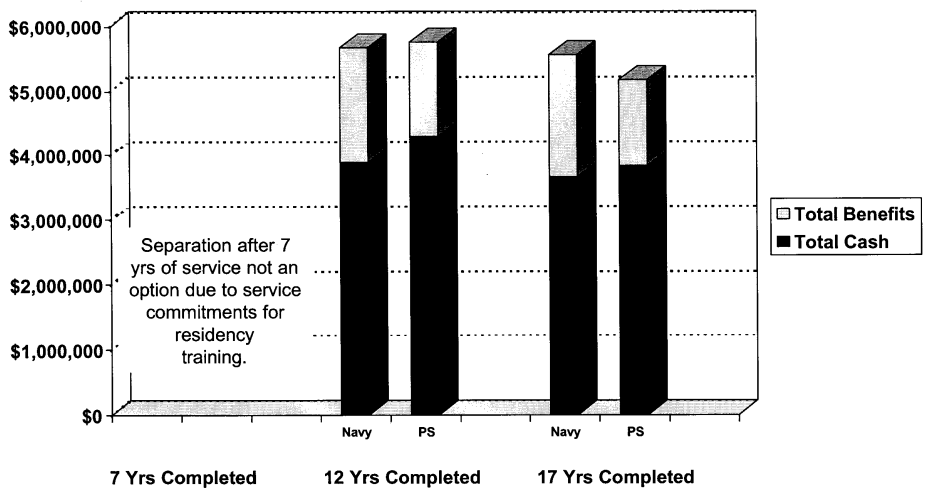
Current Annual Compensation



General Surgery

Present Value of Future Compensation & Benefits

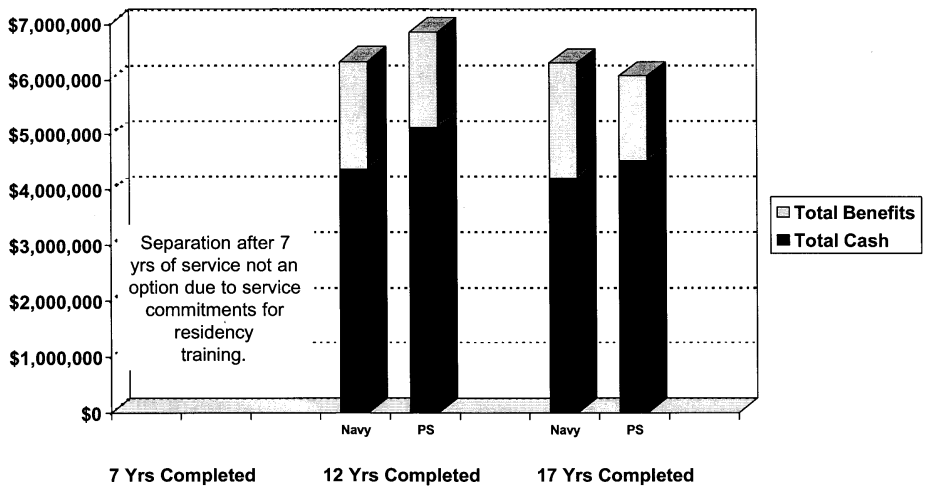
(Median Private Sector Salaries)



General Surgery

Present Value of Future Compensation & Benefits

(P75 Private Sector Salaries)



Hematology/Oncology

Current Annual Compensation

Years of Completed Navy Service	Compensation Element	Navy	Private Sector (50th Percentile)	Private Sector (75th Percentile)
7	RMC/Base Salary	$63,300	$140,300	$152,500
	Incentive Pays	$50,000		
	Total Cash	$113,300	$140,300	$152,500
	Total Benefits	$36,000	$47,100	$49,300
	Total Compensation	$149,300	$187,400	$201,800

Years of Completed Navy Service	Compensation Element	Navy	Private Sector (50th Percentile)	Private Sector (75th Percentile)
12	RMC/Base Salary	$77,600	$165,900	$187,700
	Incentive Pays	$51,000		
	Total Cash	$128,600	$165,900	$187,700
	Total Benefits	$42,900	$55,300	$63,000
	Total Compensation	$171,500	$221,200	$250,700

Years of Completed Navy Service	Compensation Element	Navy	Private Sector (50th Percentile)	Private Sector (75th Percentile)
17	RMC/Base Salary	$86,100	$178,500	$196,300
	Incentive Pays	$43,000		
	Total Cash	$129,100	$178,500	$196,300
	Total Benefits	$47,400	$59,300	$65,800
	Total Compensation	$176,500	$237,800	$262,100

Navy compensation is RMC, special and incentive pays, and benefits as of 1 July 2000

Private Sector compensation is total salary (including base and incentives) and benefits as of 1 July 2000. At 7 years of completed service, private sector compensation is for internal medicine. At 12 and 17 years of completed service, private sector compensation is for hematology/oncology.

Hematology/Oncology

Present Value of Future Compensation and Benefits

Median Private Sector Salaries

Years of Completed Navy Service	Compensation Element	Navy Service	Second Career =	Total Navy Service	Private Sector (50th Percentile)
7	RMC/Base Salary	$1,330,200	$1,913,700	$3,243,900	$3,937,100
	Incentive Pays	$507,300		$507,300	
	Total Cash	$1,837,500	$1,913,700	$3,751,200	$3,937,100
	Retirement + SBP	$488,300	$414,100	$902,400	$701,400
	Other Benefits	$244,000	$527,100	$771,100	$798,900
	Total Benefits	$732,300	$941,200	$1,673,500	$1,500,300
	Total Compensation	$2,569,800	$2,854,900	$5,424,700	$5,437,400

Years of Completed Navy Service	Compensation Element	Navy Service	Second Career =	Total Navy Service	Private Sector (50th Percentile)
12	RMC/Base Salary				
	Incentive Pays				
Separation after 12 yrs of service not an option due to service commitments for sub-specialty training.	Total Cash				
	Retirement + SBP				
	Other Benefits				
	Total Benefits				
	Total Compensation			**N/A**	**N/A**

Years of Completed Navy Service	Compensation Element	Navy Service	Second Career =	Total Navy Service	Private Sector (50th Percentile)
17	RMC/Base Salary	$273,900	$2,775,900	$3,049,800	$3,292,100
	Incentive Pays	$123,900		$123,900	
	Total Cash	$397,800	$2,775,900	$3,173,700	$3,292,100
	Retirement + SBP	$674,000	$530,900	$1,204,900	$615,700
	Other Benefits	$76,100	$566,600	$642,700	$652,200
	Total Benefits	$750,100	$1,097,500	$1,847,600	$1,267,900
	Total Compensation	$1,147,900	$3,873,400	$5,021,300	$4,560,000

Navy compensation is RMC, special and incentive pays, and benefits as of 1 July 2000.

Private Sector compensation is total salary (including base and incentives) and benefits as of 1 July 2000. At 7 years of completed service, private sector compensation assumes completion of hematology/oncology specialty training following same schedule as in Navy practice. At 17 years of completed service, private sector assumes hematology/oncology specialty.

Hematology/Oncology

Present Value of Future Compensation and Benefits

P75 Private Sector Salaries

Years of Completed Navy Service	Compensation Element	Navy Service	Second Career =	Total Navy Service	Private Sector (75th Percentile)
7	RMC/Base Salary	$1,330,200	$2,090,000	$3,420,200	$4,469,300
	Incentive Pays	$507,300		$507,300	
	Total Cash	$1,837,500	$2,090,000	$3,927,500	$4,469,300
	Retirement + SBP	$488,300	$426,900	$915,200	$722,500
	Other Benefits	$244,000	$567,700	$811,700	$898,100
	Total Benefits	$732,300	$994,600	$1,726,900	$1,620,600
	Total Compensation	$2,569,800	$3,084,600	$5,654,400	$6,089,900

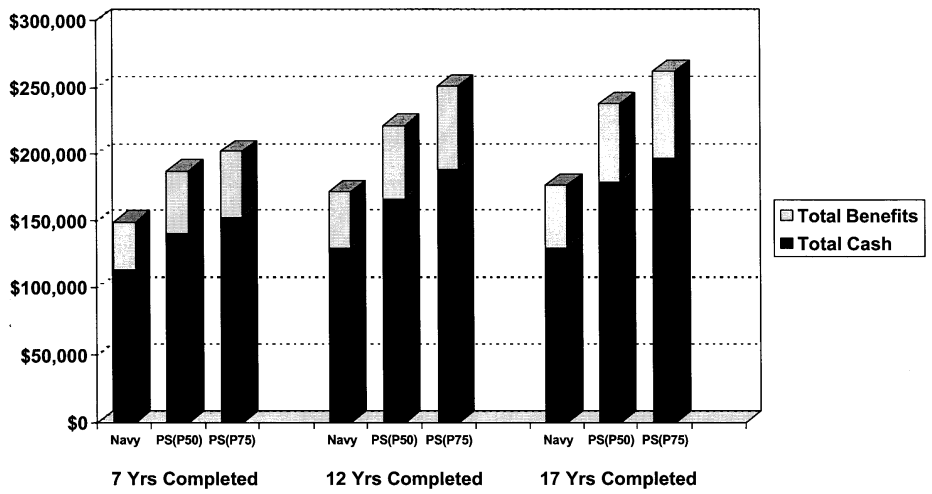
Years of Completed Navy Service	Compensation Element	Navy Service	Second Career =	Total Navy Service	Private Sector (75th Percentile)
12	RMC/Base Salary				
	Incentive Pays				
Separation after 12 yrs of service not an option due to service commitments for sub-specialty training.	Total Cash				
	Retirement + SBP				
	Other Benefits				
	Total Benefits				
	Total Compensation			**N/A**	**N/A**

Years of Completed Navy Service	Compensation Element	Navy Service	Second Career =	Total Navy Service	Private Sector (75th Percentile)
17	RMC/Base Salary	$273,900	$3,014,200	$3,288,100	$3,619,100
	Incentive Pays	$123,900		$123,900	
	Total Cash	$397,800	$3,014,200	$3,412,000	$3,619,100
	Retirement + SBP	$674,000	$546,400	$1,220,400	$633,500
	Other Benefits	$76,100	$616,000	$692,100	$718,300
	Total Benefits	$750,100	$1,162,400	$1,912,500	$1,351,800
	Total Compensation	$1,147,900	$4,176,600	$5,324,500	$4,970,900

Navy compensation is RMC, special and incentive pays, and benefits as of 1 July 2000.

Private Sector compensation is total salary (including base and incentives) and benefits as of 1 July 2000. At 7 years of completed service, private sector compensation assumes completion of hematology/oncology specialty training following same schedule as in Navy practice. At 17 years of completed service, private sector assumes hematology/oncology specialty.

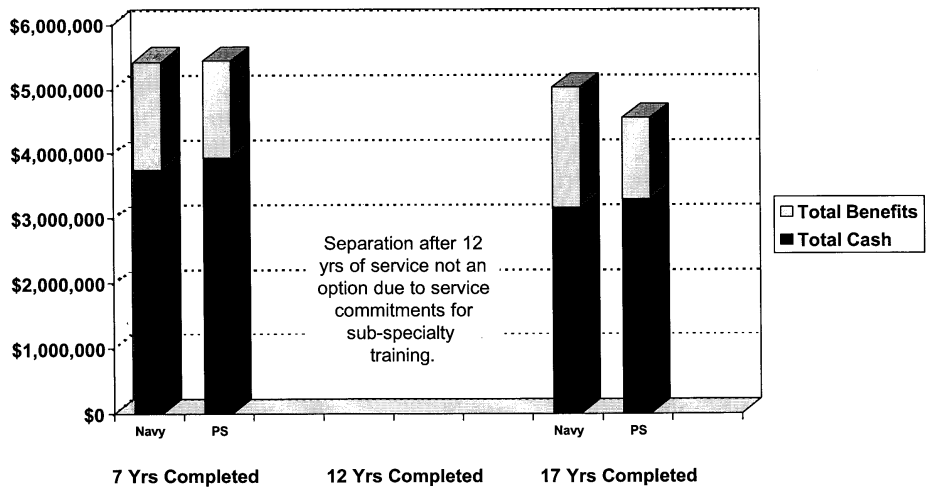
Hematology/Oncology
Current Annual Compensation



Hematology/Oncology

Present Value of Future Compensation & Benefits

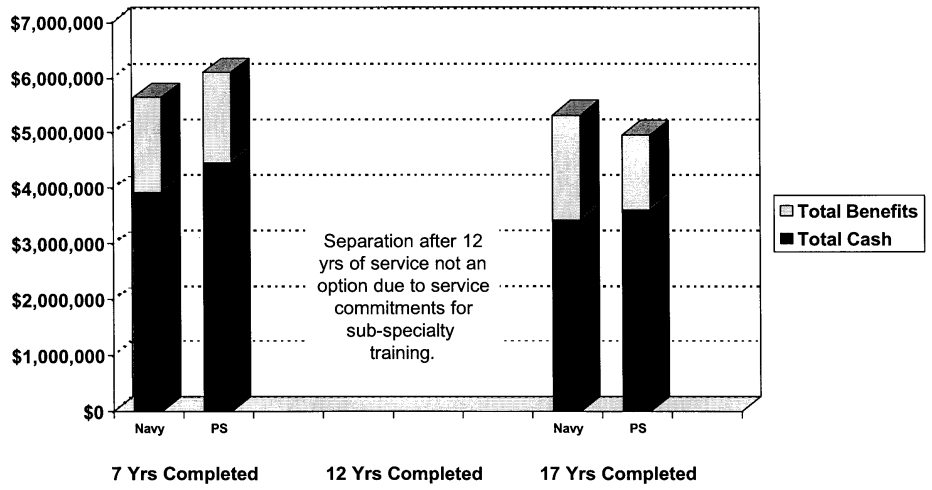
(Median Private Sector Salaries)



Hematology/Oncology

Present Value of Future Compensation & Benefits

(P75 Private Sector Salaries)



Internal Medicine

Current Annual Compensation

Years of Completed Navy Service	Compensation Element	Navy	Private Sector (50th Percentile)	Private Sector (75th Percentile)
7	RMC/Base Salary	$63,300	$140,300	$152,500
	Incentive Pays	$50,000		
	Total Cash	$113,300	$140,300	$152,500
	Total Benefits	$36,000	$47,100	$49,300
	Total Compensation	$149,300	$187,400	$201,800

Years of Completed Navy Service	Compensation Element	Navy	Private Sector (50th Percentile)	Private Sector (75th Percentile)
12	RMC/Base Salary	$77,600	$148,100	$163,000
	Incentive Pays	$50,000		
	Total Cash	$127,600	$148,100	$163,000
	Total Benefits	$42,900	$49,200	$53,100
	Total Compensation	$170,500	$197,300	$216,100

Years of Completed Navy Service	Compensation Element	Navy	Private Sector (50th Percentile)	Private Sector (75th Percentile)
17	RMC/Base Salary	$86,100	$155,900	$173,600
	Incentive Pays	$49,000		
	Total Cash	$135,100	$155,900	$173,600
	Total Benefits	$47,400	$51,300	$56,900
	Total Compensation	$182,500	$207,200	$230,500

Navy compensation is RMC, special and incentive pays, and benefits as of 1 July 2000

Private Sector compensation is total salary (including base and incentives) and benefits as of 1 July 2000

Internal Medicine

Present Value of Future Compensation and Benefits

Median Private Sector Salaries

Years of Completed Navy Service	Compensation Element	Navy Service	+ Second Career =	Total Navy Service	Private Sector (50th Percentile)
7	RMC/Base Salary	$1,330,200	$1,798,300	$3,128,500	$3,385,200
	Incentive Pays	$517,300		$517,300	
	Total Cash	$1,847,500	$1,798,300	$3,645,800	$3,385,200
	Retirement + SBP	$488,300	$320,000	$808,300	$545,300
	Other Benefits	$244,000	$459,300	$703,300	$700,900
	Total Benefits	$732,300	$779,300	$1,511,600	$1,246,200
	Total Compensation	$2,579,800	$2,577,600	$5,157,400	$4,631,400

Years of Completed Navy Service	Compensation Element	Navy Service	+ Second Career =	Total Navy Service	Private Sector (50th Percentile)
12	RMC/Base Salary	$628,100	$2,044,300	$2,672,400	$3,119,900
	Incentive Pays	$326,900		$326,900	
	Total Cash	$955,000	$2,044,300	$2,999,300	$3,119,900
	Retirement + SBP	$550,800	$362,300	$913,100	$518,500
	Other Benefits	$179,200	$462,100	$641,300	$633,500
	Total Benefits	$730,000	$824,400	$1,554,400	$1,152,000
	Total Compensation	$1,685,000	$2,868,700	$4,553,700	$4,271,900

Years of Completed Navy Service	Compensation Element	Navy Service	+ Second Career =	Total Navy Service	Private Sector (50th Percentile)
17	RMC/Base Salary	$273,900	$2,322,700	$2,596,600	$2,765,900
	Incentive Pays	$139,400		$139,400	
	Total Cash	$413,300	$2,322,700	$2,736,000	$2,765,900
	Retirement + SBP	$674,000	$410,200	$1,084,200	$476,100
	Other Benefits	$76,100	$478,800	$554,900	$551,600
	Total Benefits	$750,100	$889,000	$1,639,100	$1,027,700
	Total Compensation	$1,163,400	$3,211,700	$4,375,100	$3,793,600

Navy compensation is RMC, special and incentive pays, and benefits as of 1 July 2000

Private Sector compensation is total salary (including base and incentives) and benefits as of 1 July 2000

Internal Medicine

Present Value of Future Compensation and Benefits

P75 Private Sector Salaries

Years of Completed Navy Service	Compensation Element	Navy Service	+ Second Career =	Total Navy Service	Private Sector (75th Percentile)
7	RMC/Base Salary	$1,330,200	$2,002,500	$3,332,700	$3,681,600
	Incentive Pays	$517,300		$517,300	
	Total Cash	$1,847,500	$2,002,500	$3,850,000	$3,681,600
	Retirement + SBP	$488,300	$386,700	$875,000	$657,300
	Other Benefits	$244,000	$495,500	$739,500	$730,300
	Total Benefits	$732,300	$882,200	$1,614,500	$1,387,600
	Total Compensation	$2,579,800	$2,884,700	$5,464,500	$5,069,200

Years of Completed Navy Service	Compensation Element	Navy Service	+ Second Career =	Total Navy Service	Private Sector (75th Percentile)
12	RMC/Base Salary	$628,100	$2,282,100	$2,910,200	$3,435,600
	Incentive Pays	$326,900		$326,900	
	Total Cash	$955,000	$2,282,100	$3,237,100	$3,435,600
	Retirement + SBP	$550,800	$438,600	$989,400	$626,700
	Other Benefits	$179,200	$505,900	$685,100	$679,400
	Total Benefits	$730,000	$944,500	$1,674,500	$1,306,100
	Total Compensation	$1,685,000	$3,226,600	$4,911,600	$4,741,700

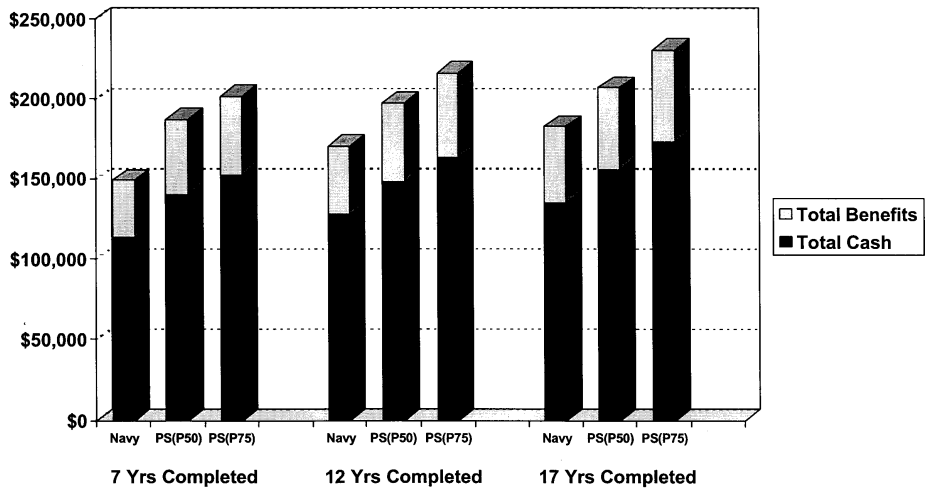
Years of Completed Navy Service	Compensation Element	Navy Service	+ Second Career =	Total Navy Service	Private Sector (75th Percentile)
17	RMC/Base Salary	$273,900	$2,598,700	$2,872,600	$3,079,500
	Incentive Pays	$139,400		$139,400	
	Total Cash	$413,300	$2,598,700	$3,012,000	$3,079,500
	Retirement + SBP	$674,000	$497,300	$1,171,300	$576,900
	Other Benefits	$76,100	$531,300	$607,400	$607,500
	Total Benefits	$750,100	$1,028,600	$1,778,700	$1,184,400
	Total Compensation	$1,163,400	$3,627,300	$4,790,700	$4,263,900

Navy compensation is RMC, special and incentive pays, and benefits as of 1 July 2000

Private Sector compensation is total salary (including base and incentives) and benefits as of 1 July 2000

Internal Medicine

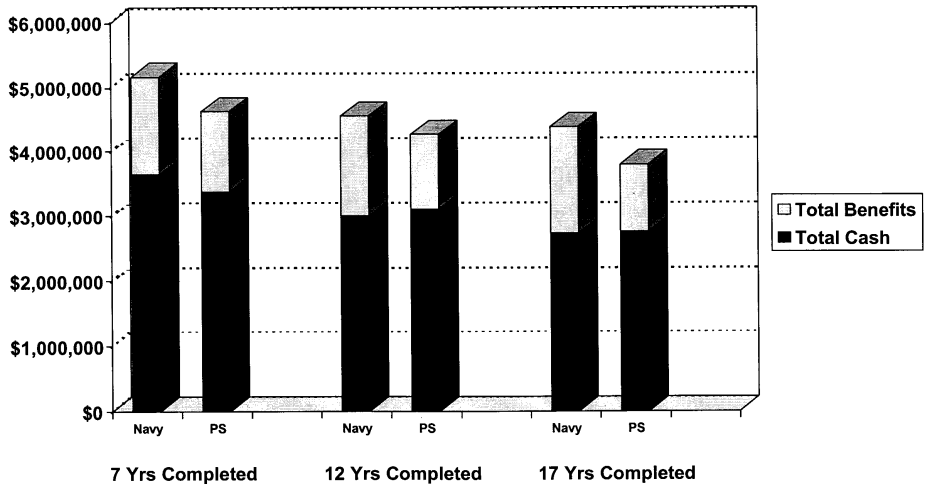
Current Annual Compensation



Internal Medicine

Present Value of Future Compensation & Benefits

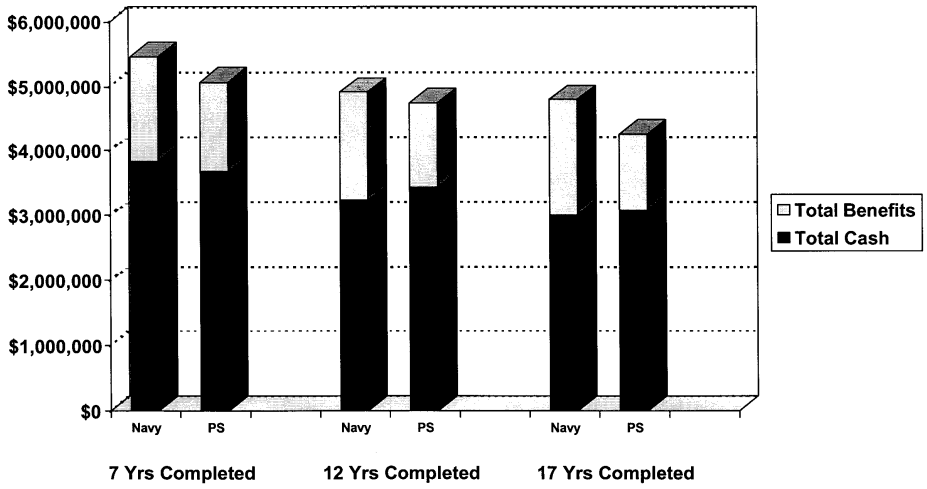
(Median Private Sector Salaries)



Internal Medicine

Present Value of Future Compensation & Benefits

(P75 Private Sector Salaries)



Neurology

Current Annual Compensation

Years of Completed Navy Service	Compensation Element	Navy	Private Sector (50th Percentile)	Private Sector (75th Percentile)
7	RMC/Base Salary	$63,300	$157,600	$175,800
	Incentive Pays	$42,000		
	Total Cash	$105,300	$157,600	$175,800
	Total Benefits	$36,000	$54,000	$62,400
	Total Compensation	$141,300	$211,600	$238,200

Years of Completed Navy Service	Compensation Element	Navy	Private Sector (50th Percentile)	Private Sector (75th Percentile)
12	RMC/Base Salary	$77,600	$164,200	$182,400
	Incentive Pays	$50,000		
	Total Cash	$127,600	$164,200	$182,400
	Total Benefits	$42,900	$55,700	$63,800
	Total Compensation	$170,500	$219,900	$246,200

Years of Completed Navy Service	Compensation Element	Navy	Private Sector (50th Percentile)	Private Sector (75th Percentile)
17	RMC/Base Salary	$86,100	$170,700	$189,100
	Incentive Pays	$49,000		
	Total Cash	$135,100	$170,700	$189,100
	Total Benefits	$47,400	$57,300	$65,200
	Total Compensation	$182,500	$228,000	$254,300

Navy compensation is RMC, special and incentive pays, and benefits as of 1 July 2000

Private Sector compensation is total salary (including base and incentives) and benefits as of 1 July 2000

Neurology

Present Value of Future Compensation and Benefits

Median Private Sector Salaries

Years of Completed Navy Service	Compensation Element	Navy Service	+ Second Career =	Total Navy Service	Private Sector (50th Percentile)
7	RMC/Base Salary Incentive Pays				
Separation after 7 yrs of service not an option due to service commitments for residency training.	Total Cash				
	Retirement + SBP Other Benefits				
	Total Benefits				
	Total Compensation			N/A	N/A

Years of Completed Navy Service	Compensation Element	Navy Service	+ Second Career =	Total Navy Service	Private Sector (50th Percentile)
12	RMC/Base Salary Incentive Pays	$628,100 $340,700	$2,231,300	$2,859,400 $340,700	$3,459,400
	Total Cash	$968,800	$2,231,300	$3,200,100	$3,459,400
	Retirement + SBP Other Benefits	$550,800 $179,200	$394,300 $504,200	$945,100 $683,400	$565,300 $709,400
	Total Benefits	$730,000	$898,500	$1,628,500	$1,274,700
	Total Compensation	$1,698,800	$3,129,800	$4,828,600	$4,734,100

Years of Completed Navy Service	Compensation Element	Navy Service	+ Second Career =	Total Navy Service	Private Sector (50th Percentile)
17	RMC/Base Salary Incentive Pays	$273,900 $134,800	$2,529,800	$2,803,700 $134,800	$3,029,500
	Total Cash	$408,700	$2,529,800	$2,938,500	$3,029,500
	Retirement + SBP Other Benefits	$674,000 $76,100	$446,000 $525,600	$1,120,000 $601,700	$518,000 $611,000
	Total Benefits	$750,100	$971,600	$1,721,700	$1,129,000
	Total Compensation	$1,158,800	$3,501,400	$4,660,200	$4,158,500

Navy compensation is RMC, special and incentive pays, and benefits as of 1 July 2000

Private Sector compensation is total salary (including base and incentives) and benefits as of 1 July 2000

Neurology

Present Value of Future Compensation and Benefits

P75 Private Sector Salaries

Years of Completed Navy Service	Compensation Element	Navy Service	+ Second Career =	Total Navy Service	Private Sector (75th Percentile)
7	RMC/Base Salary Incentive Pays				
Separation after 7 yrs of service not an option due to service commitments for residency training.	Total Cash				
	Retirement + SBP Other Benefits				
	Total Benefits				
	Total Compensation			N/A	N/A

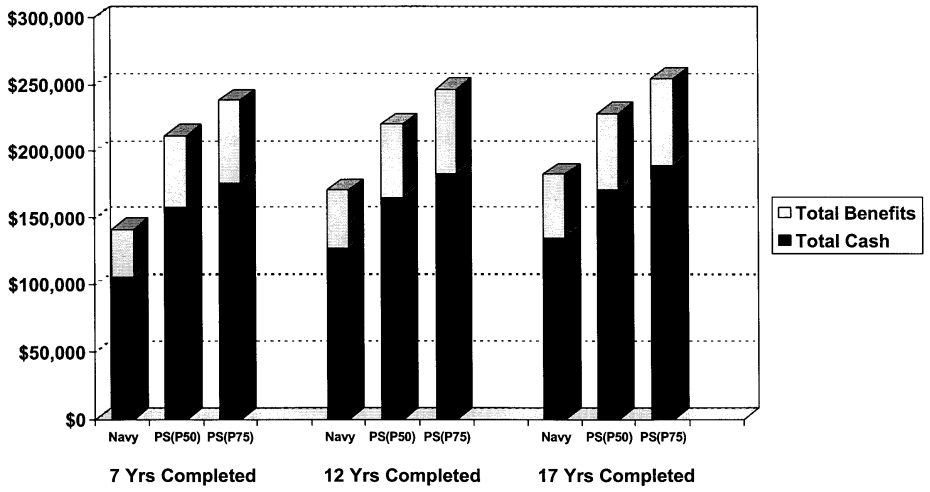
Years of Completed Navy Service	Compensation Element	Navy Service	+ Second Career =	Total Navy Service	Private Sector (75th Percentile)
12	RMC/Base Salary Incentive Pays	$628,100 $340,700	$2,469,000	$3,097,100 $340,700	$3,844,200
	Total Cash	$968,800	$2,469,000	$3,437,800	$3,844,200
	Retirement + SBP Other Benefits	$550,800 $179,200	$438,100 $559,700	$988,900 $738,900	$627,200 $804,700
	Total Benefits	$730,000	$997,800	$1,727,800	$1,431,900
	Total Compensation	$1,698,800	$3,466,800	$5,165,600	$5,276,100

Years of Completed Navy Service	Compensation Element	Navy Service	+ Second Career =	Total Navy Service	Private Sector (75th Percentile)
17	RMC/Base Salary Incentive Pays	$273,900 $134,800	$2,798,000	$3,071,900 $134,800	$3,355,800
	Total Cash	$408,700	$2,798,000	$3,206,700	$3,355,800
	Retirement + SBP Other Benefits	$674,000 $76,100	$495,200 $588,000	$1,169,200 $664,100	$574,900 $688,700
	Total Benefits	$750,100	$1,083,200	$1,833,300	$1,263,600
	Total Compensation	$1,158,800	$3,881,200	$5,040,000	$4,619,400

Navy compensation is RMC, special and incentive pays, and benefits as of 1 July 2000

Private Sector compensation is total salary (including base and incentives) and benefits as of 1 July 2000

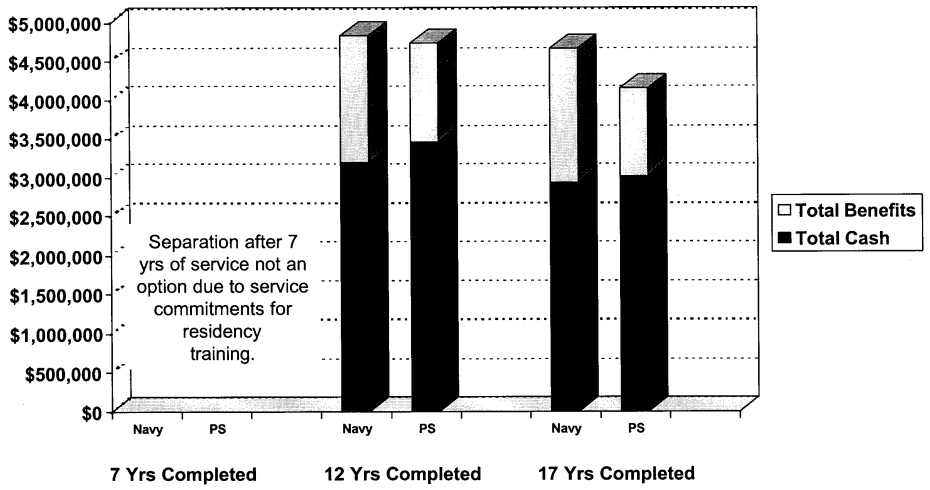
Neurology
Current Annual Compensation



Neurology

Present Value of Future Compensation & Benefits

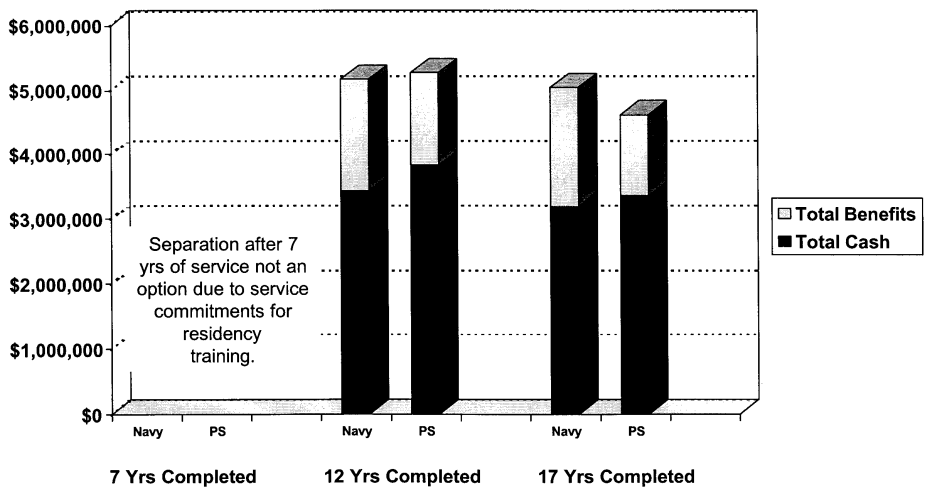
(Median Private Sector Salaries)



Neurology

Present Value of Future Compensation & Benefits

(P75 Private Sector Salaries)



Neurosurgery

Current Annual Compensation

Years of Completed Navy Service	Compensation Element	Navy	Private Sector (50th Percentile)	Private Sector (75th Percentile)
7 Navy physician is in residency training program at 7 years of service				
			N/A	**N/A**

Years of Completed Navy Service	Compensation Element	Navy	Private Sector (50th Percentile)	Private Sector (75th Percentile)
12	RMC/Base Salary Incentive Pays	$77,600 $73,000	$339,200	Insufficient Data
	Total Cash	$150,600	$339,200	
	Total Benefits	$42,900	$96,000	
	Total Compensation	$193,500	$435,200	

Years of Completed Navy Service	Compensation Element	Navy	Private Sector (50th Percentile)	Private Sector (75th Percentile)
17	RMC/Base Salary Incentive Pays	$86,100 $65,000	$331,400	Insufficient Data
	Total Cash	$151,100	$331,400	
	Total Benefits	$47,400	$96,800	
	Total Compensation	$198,500	$428,200	

Navy compensation is RMC, special and incentive pays, and benefits as of 1 July 2000

Private Sector compensation is total salary (including base and incentives) and benefits as of 1 July 2000

Insufficient data to display comparisons for Private Sector 75th percentile

Neurosurgery

Present Value of Future Compensation and Benefits

Median Private Sector Salaries

Years of Completed Navy Service	Compensation Element	Navy Service	+ Second Career =	Total Navy Service	Private Sector (50th Percentile)
7	RMC/Base Salary Incentive Pays				
Separation after 7 yrs of service not an option because physician is in residency training.	Total Cash				
	Retirement + SBP Other Benefits				
	Total Benefits				
	Total Compensation			**N/A**	**N/A**

Years of Completed Navy Service	Compensation Element	Navy Service	+ Second Career =	Total Navy Service	Private Sector (50th Percentile)
12	RMC/Base Salary Incentive Pays				
Separation after 12 yrs of service not an option due to service commitments for residency training.	Total Cash				
	Retirement + SBP Other Benefits				
	Total Benefits				
	Total Compensation			**N/A**	**N/A**

Years of Completed Navy Service	Compensation Element	Navy Service	+ Second Career =	Total Navy Service	Private Sector (50th Percentile)
17	RMC/Base Salary Incentive Pays	$273,900 $187,400	$4,743,100	$5,017,000 $187,400	$5,879,300
	Total Cash	$461,300	$4,743,100	$5,204,400	$5,879,300
	Retirement + SBP Other Benefits	$674,000 $76,100	$744,100 $840,500	$1,418,100 $916,600	$865,000 $1,000,200
	Total Benefits	$750,100	$1,584,600	$2,334,700	$1,865,200
	Total Compensation	$1,211,400	$6,327,700	$7,539,100	$7,744,500

Navy compensation is RMC, special and incentive pays, and benefits as of 1 July 2000

Private Sector compensation is total salary (including base and incentives) and benefits as of 1 July 2000

Neurosurgery

Present Value of Future Compensation and Benefits

P75 Private Sector Salaries

Years of Completed Navy Service	Compensation Element	Navy Service	+ Second Career =	Total Navy Service	Private Sector (75th Percentile)
7	RMC/Base Salary				
	Incentive Pays				
Separation after 7 yrs of service not an option because physician is in residency training.	Total Cash				
	Retirement + SBP				
	Other Benefits				
	Total Benefits				
	Total Compensation			**N/A**	**N/A**

Years of Completed Navy Service	Compensation Element	Navy Service	+ Second Career =	Total Navy Service	Private Sector (75th Percentile)
12	RMC/Base Salary				
	Incentive Pays				
Separation after 12 yrs of service not an option due to service commitments for residency training.	Total Cash				
	Retirement + SBP				
	Other Benefits				
	Total Benefits				
	Total Compensation			**N/A**	**N/A**

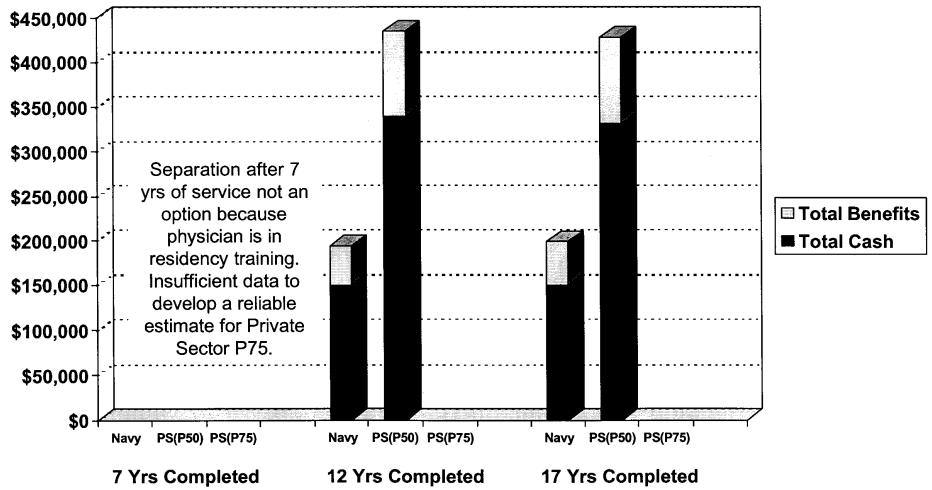
Years of Completed Navy Service	Compensation Element	Navy Service	+ Second Career =	Total Navy Service	Private Sector (75th Percentile)
17	RMC/Base Salary	$273,900	$5,443,500	$5,717,400	Insufficient Data
	Incentive Pays	$187,400		$187,400	
	Total Cash	$461,300	$5,443,500	$5,904,800	
	Retirement + SBP	$674,000	$937,500	$1,611,500	
	Other Benefits	$76,100	$1,079,600	$1,155,700	
	Total Benefits	$750,100	$2,017,100	$2,767,200	
	Total Compensation	$1,211,400	$7,460,600	$8,672,000	

Navy compensation is RMC, special and incentive pays, and benefits as of 1 July 2000

Private Sector compensation is total salary (including base and incentives) and benefits as of 1 July 2000

Insufficient data to display comparisons for Private Sector 75th percentile

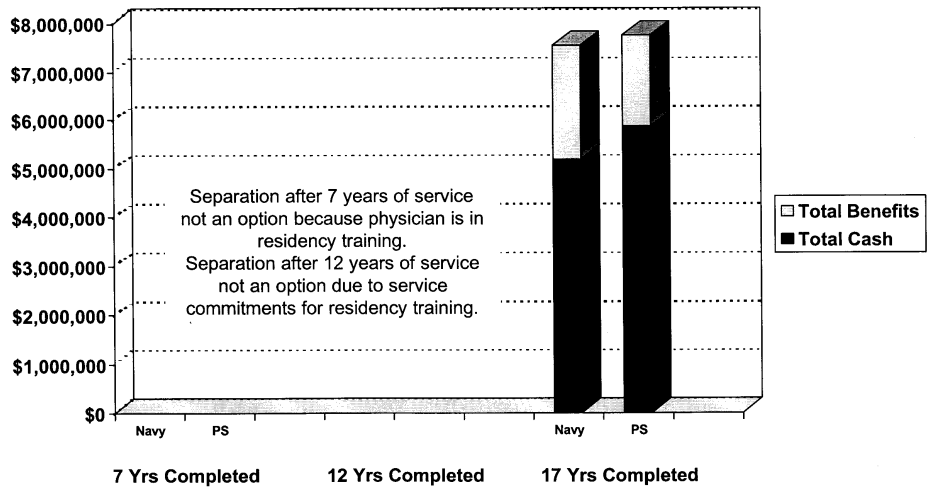
Neurosurgery
Current Annual Compensation



Neurosurgery

Present Value of Future Compensation & Benefits

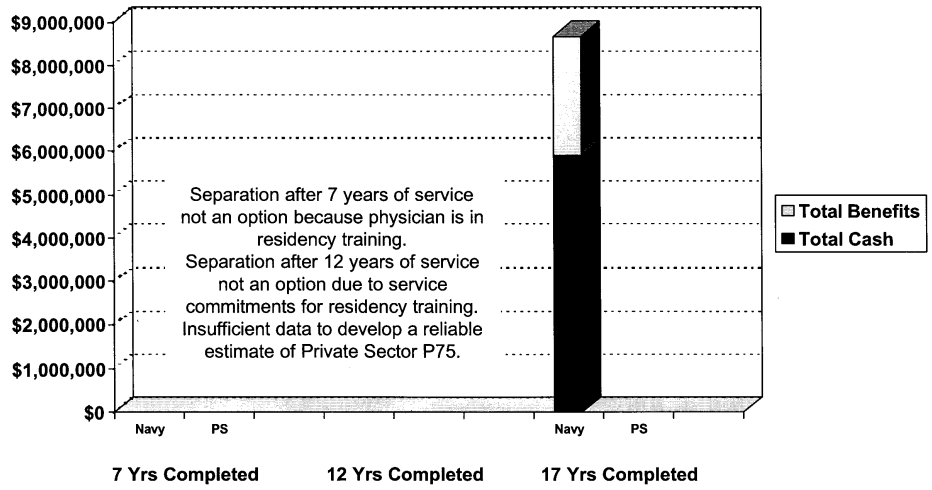
(Median Private Sector Salaries)



Neurosurgery

Present Value of Future Compensation & Benefits

(P75 Private Sector Salaries)



Obstetrics/Gynecology

Current Annual Compensation

Years of Completed Navy Service	Compensation Element	Navy	Private Sector (50th Percentile)	Private Sector (75th Percentile)
7	RMC/Base Salary	$63,300	$196,700	$218,400
	Incentive Pays	$57,500		
	Total Cash	$120,800	$196,700	$218,400
	Total Benefits	$36,000	$61,400	$67,600
	Total Compensation	$156,800	$258,100	$286,000

Years of Completed Navy Service	Compensation Element	Navy	Private Sector (50th Percentile)	Private Sector (75th Percentile)
12	RMC/Base Salary	$77,600	$203,100	$226,400
	Incentive Pays	$68,000		
	Total Cash	$145,600	$203,100	$226,400
	Total Benefits	$42,900	$64,100	$70,700
	Total Compensation	$188,500	$267,200	$297,100

Years of Completed Navy Service	Compensation Element	Navy	Private Sector (50th Percentile)	Private Sector (75th Percentile)
17	RMC/Base Salary	$86,100	$209,400	$234,400
	Incentive Pays	$67,000		
	Total Cash	$153,100	$209,400	$234,400
	Total Benefits	$47,400	$66,700	$73,800
	Total Compensation	$200,500	$276,100	$308,200

Navy compensation is RMC, special and incentive pays, and benefits as of 1 July 2000

Private Sector compensation is total salary (including base and incentives) and benefits as of 1 July 2000

Obstetrics/Gynecology

Present Value of Future Compensation and Benefits

Median Private Sector Salaries

Years of Completed Navy Service	Compensation Element	Navy Service	+ Second Career =	Total Navy Service	Private Sector (50th Percentile)
7	RMC/Base Salary Incentive Pays				
Separation after 7 yrs of service not an option due to service commitments for residency training.	Total Cash				
	Retirement + SBP Other Benefits				
	Total Benefits				
	Total Compensation			**N/A**	**N/A**

Years of Completed Navy Service	Compensation Element	Navy Service	+ Second Career =	Total Navy Service	Private Sector (50th Percentile)
12	RMC/Base Salary Incentive Pays	$628,100 $466,500	$2,729,500	$3,357,600 $466,500	$4,278,700
	Total Cash	$1,094,600	$2,729,500	$3,824,100	$4,278,700
	Retirement + SBP Other Benefits	$550,800 $179,200	$488,800 $574,400	$1,039,600 $753,600	$699,500 $807,900
	Total Benefits	$730,000	$1,063,200	$1,793,200	$1,507,400
	Total Compensation	$1,824,600	$3,792,700	$5,617,300	$5,786,100

Years of Completed Navy Service	Compensation Element	Navy Service	+ Second Career =	Total Navy Service	Private Sector (50th Percentile)
17	RMC/Base Salary Incentive Pays	$273,900 $186,700	$3,090,800	$3,364,700 $186,700	$3,716,200
	Total Cash	$460,600	$3,090,800	$3,551,400	$3,716,200
	Retirement + SBP Other Benefits	$674,000 $76,100	$553,200 $606,100	$1,227,200 $682,200	$642,100 $704,200
	Total Benefits	$750,100	$1,159,300	$1,909,400	$1,346,300
	Total Compensation	$1,210,700	$4,250,100	$5,460,800	$5,062,500

Navy compensation is RMC, special and incentive pays, and benefits as of 1 July 2000

Private Sector compensation is total salary (including base and incentives) and benefits as of 1 July 2000

Obstetrics/Gynecology

Present Value of Future Compensation and Benefits

P75 Private Sector Salaries

Years of Completed Navy Service	Compensation Element	Navy Service	+ Second Career =	Total Navy Service	Private Sector (75th Percentile)
7	RMC/Base Salary Incentive Pays				
Separation after 7 yrs of service not an option due to service commitments for residency training.	Total Cash				
	Retirement + SBP Other Benefits				
	Total Benefits				
	Total Compensation			**N/A**	**N/A**

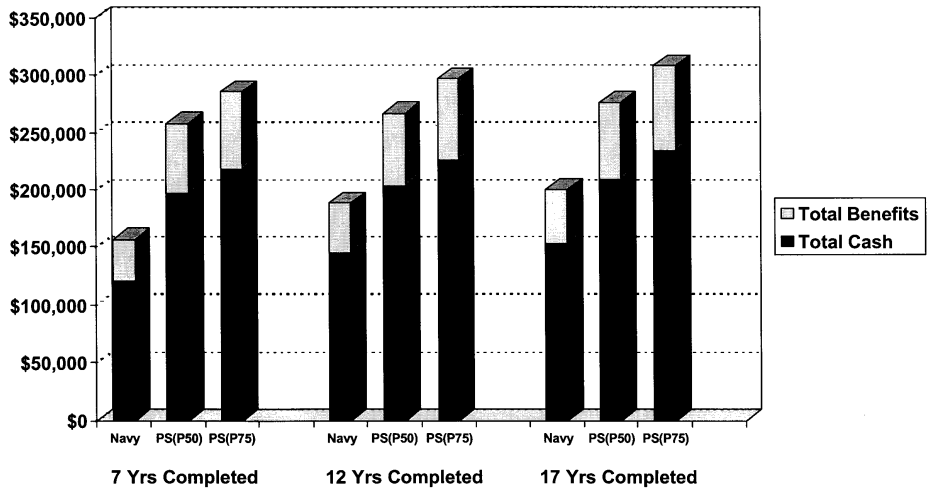
Years of Completed Navy Service	Compensation Element	Navy Service	+ Second Career =	Total Navy Service	Private Sector (75th Percentile)
12	RMC/Base Salary Incentive Pays	$628,100 $466,500	$3,058,800	$3,686,900 $466,500	$4,770,100
	Total Cash	$1,094,600	$3,058,800	$4,153,400	$4,770,100
	Retirement + SBP Other Benefits	$550,800 $179,200	$543,800 $625,900	$1,094,600 $805,100	$777,600 $885,400
	Total Benefits	$730,000	$1,169,700	$1,899,700	$1,663,000
	Total Compensation	$1,824,600	$4,228,500	$6,053,100	$6,433,100

Years of Completed Navy Service	Compensation Element	Navy Service	+ Second Career =	Total Navy Service	Private Sector (75th Percentile)
17	RMC/Base Salary Incentive Pays	$273,900 $186,700	$3,465,700	$3,739,600 $186,700	$4,159,100
	Total Cash	$460,600	$3,465,700	$3,926,300	$4,159,100
	Retirement + SBP Other Benefits	$674,000 $76,100	$615,500 $664,800	$1,289,500 $740,900	$714,200 $773,700
	Total Benefits	$750,100	$1,280,300	$2,030,400	$1,487,900
	Total Compensation	$1,210,700	$4,746,000	$5,956,700	$5,647,000

Navy compensation is RMC, special and incentive pays, and benefits as of 1 July 2000

Private Sector compensation is total salary (including base and incentives) and benefits as of 1 July 2000

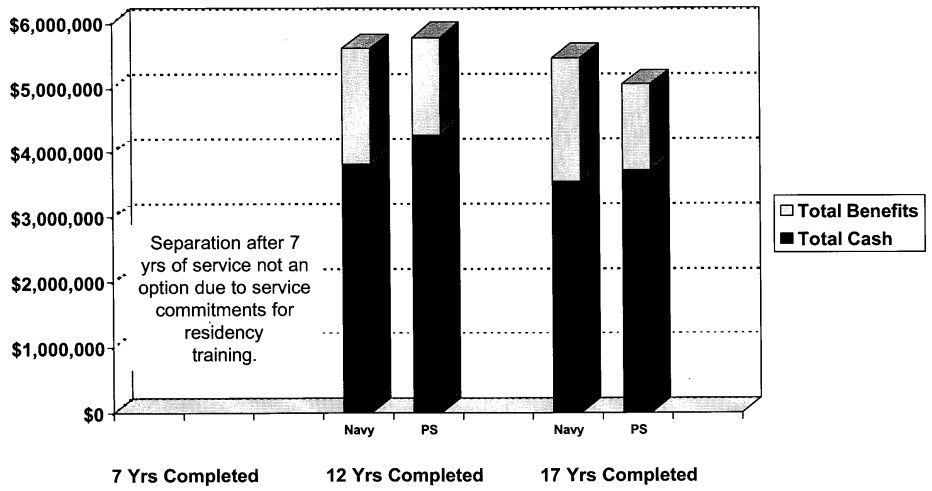
Obstetrics/Gynecology
Current Annual Compensation



Obstetrics/Gynecology

Present Value of Future Compensation & Benefits

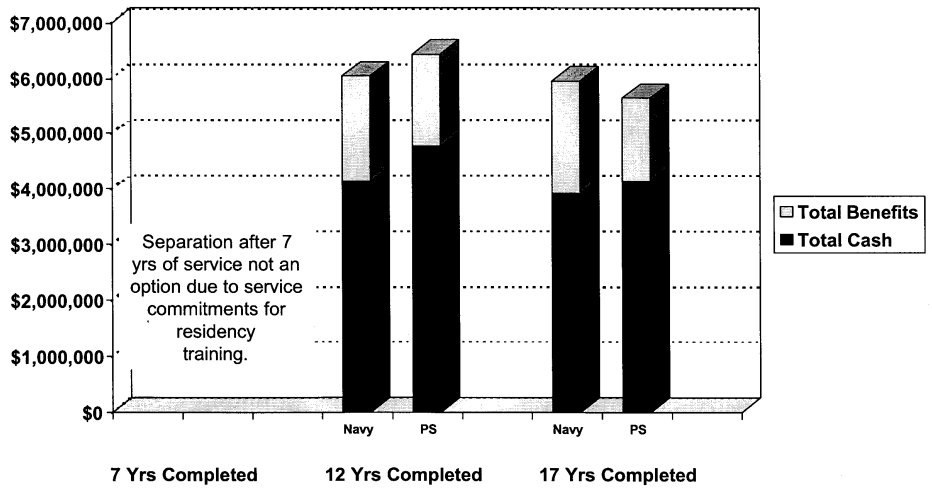
(Median Private Sector Salaries)



Obstetrics/Gynecology

Present Value of Future Compensation & Benefits

(P75 Private Sector Salaries)



Industrial/Occupational Medicine

Current Annual Compensation

Years of Completed Navy Service	Compensation Element	Navy	Private Sector (50th Percentile)	Private Sector (75th Percentile)
7	RMC/Base Salary	$63,300	$151,800	$164,200
	Incentive Pays	$50,000		
	Total Cash	$113,300	$151,800	$164,200
	Total Benefits	$36,000	$50,000	$53,900
	Total Compensation	$149,300	$201,800	$218,100

Years of Completed Navy Service	Compensation Element	Navy	Private Sector (50th Percentile)	Private Sector (75th Percentile)
12	RMC/Base Salary	$77,600	$152,300	$167,500
	Incentive Pays	$50,000		
	Total Cash	$127,600	$152,300	$167,500
	Total Benefits	$42,900	$51,100	$55,000
	Total Compensation	$170,500	$203,400	$222,500

Years of Completed Navy Service	Compensation Element	Navy	Private Sector (50th Percentile)	Private Sector (75th Percentile)
17	RMC/Base Salary	$86,100	$152,900	$170,800
	Incentive Pays	$49,000		
	Total Cash	$135,100	$152,900	$170,800
	Total Benefits	$47,400	$52,300	$56,000
	Total Compensation	$182,500	$205,200	$226,800

Navy compensation is RMC, special and incentive pays, and benefits as of 1 July 2000

Private Sector compensation is total salary (including base and incentives) and benefits as of 1 July 2000

Industrial/Occupational Medicine

Present Value of Future Compensation and Benefits

Median Private Sector Salaries

Years of Completed Navy Service	Compensation Element	Navy Service	+Second Career =	Total Navy Service	Private Sector (50th Percentile)
7	RMC/Base Salary	$1,330,200	$1,673,500	$3,003,700	$3,424,400
	Incentive Pays	$513,600		$513,600	
	Total Cash	$1,843,800	$1,673,500	$3,517,300	$3,424,400
	Retirement + SBP	$488,300	$308,100	$796,400	$527,300
	Other Benefits	$244,000	$453,400	$697,400	$700,100
	Total Benefits	$732,300	$761,500	$1,493,800	$1,227,400
	Total Compensation	$2,576,100	$2,435,000	$5,011,100	$4,651,800

Years of Completed Navy Service	Compensation Element	Navy Service	+Second Career =	Total Navy Service	Private Sector (50th Percentile)
12	RMC/Base Salary	$628,100	$1,890,400	$2,518,500	$3,030,500
	Incentive Pays	$322,100		$322,100	
	Total Cash	$950,200	$1,890,400	$2,840,600	$3,030,500
	Retirement + SBP	$550,800	$348,400	$899,200	$499,700
	Other Benefits	$179,200	$454,100	$633,300	$626,200
	Total Benefits	$730,000	$802,500	$1,532,500	$1,125,900
	Total Compensation	$1,680,200	$2,692,900	$4,373,100	$4,156,400

Years of Completed Navy Service	Compensation Element	Navy Service	+Second Career =	Total Navy Service	Private Sector (50th Percentile)
17	RMC/Base Salary	$273,900	$2,135,000	$2,408,900	$2,587,800
	Incentive Pays	$139,400		$139,400	
	Total Cash	$413,300	$2,135,000	$2,548,300	$2,587,800
	Retirement + SBP	$674,000	$393,800	$1,067,800	$457,400
	Other Benefits	$76,100	$468,200	$544,300	$540,400
	Total Benefits	$750,100	$862,000	$1,612,100	$997,800
	Total Compensation	$1,163,400	$2,997,000	$4,160,400	$3,585,600

Navy compensation is RMC, special and incentive pays, and benefits as of 1 July 2000

Private Sector compensation is total salary (including base and incentives) and benefits as of 1 July 2000

Industrial/Occupational Medicine

Present Value of Future Compensation and Benefits

P75 Private Sector Salaries

Years of Completed Navy Service	Compensation Element	Navy Service	+Second Career =	Total Navy Service	Private Sector (75th Percentile)
7	RMC/Base Salary	$1,330,200	$1,883,200	$3,213,400	$3,704,500
	Incentive Pays	$513,600		$513,600	
	Total Cash	$1,843,800	$1,883,200	$3,727,000	$3,704,500
	Retirement + SBP	$488,300	$327,500	$815,800	$559,900
	Other Benefits	$244,000	$476,000	$720,000	$748,600
	Total Benefits	$732,300	$803,500	$1,535,800	$1,308,500
	Total Compensation	$2,576,100	$2,686,700	$5,262,800	$5,013,000

Years of Completed Navy Service	Compensation Element	Navy Service	+Second Career =	Total Navy Service	Private Sector (75th Percentile)
12	RMC/Base Salary	$628,100	$2,129,200	$2,757,300	$3,331,900
	Incentive Pays	$322,100		$322,100	
	Total Cash	$950,200	$2,129,200	$3,079,400	$3,331,900
	Retirement + SBP	$550,800	$370,300	$921,100	$530,700
	Other Benefits	$179,200	$479,500	$658,700	$668,300
	Total Benefits	$730,000	$849,800	$1,579,800	$1,199,000
	Total Compensation	$1,680,200	$2,979,000	$4,659,200	$4,530,900

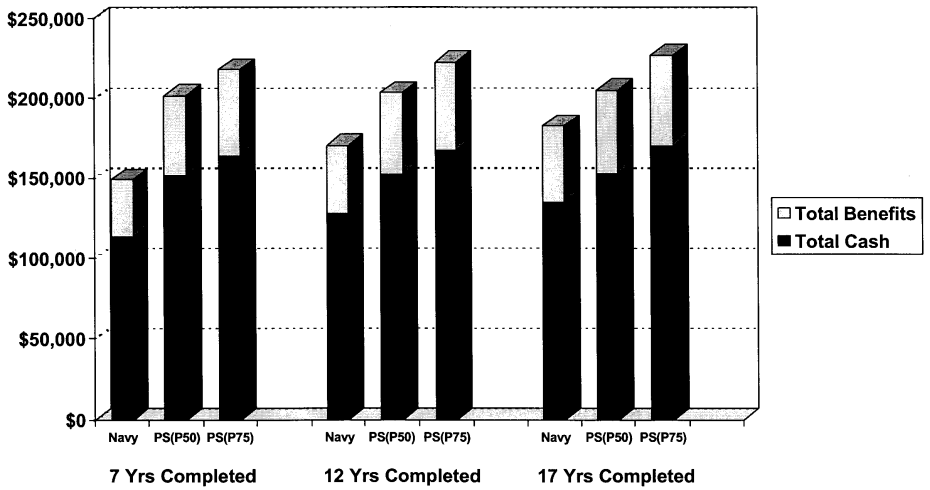
Years of Completed Navy Service	Compensation Element	Navy Service	+Second Career =	Total Navy Service	Private Sector (75th Percentile)
17	RMC/Base Salary	$273,900	$2,406,400	$2,680,300	$2,890,500
	Incentive Pays	$139,400		$139,400	
	Total Cash	$413,300	$2,406,400	$2,819,700	$2,890,500
	Retirement + SBP	$674,000	$418,500	$1,092,500	$486,100
	Other Benefits	$76,100	$496,900	$573,000	$575,600
	Total Benefits	$750,100	$915,400	$1,665,500	$1,061,700
	Total Compensation	$1,163,400	$3,321,800	$4,485,200	$3,952,200

Navy compensation is RMC, special and incentive pays, and benefits as of 1 July 2000

Private Sector compensation is total salary (including base and incentives) and benefits as of 1 July 2000

Industrial/Occupational Medicine

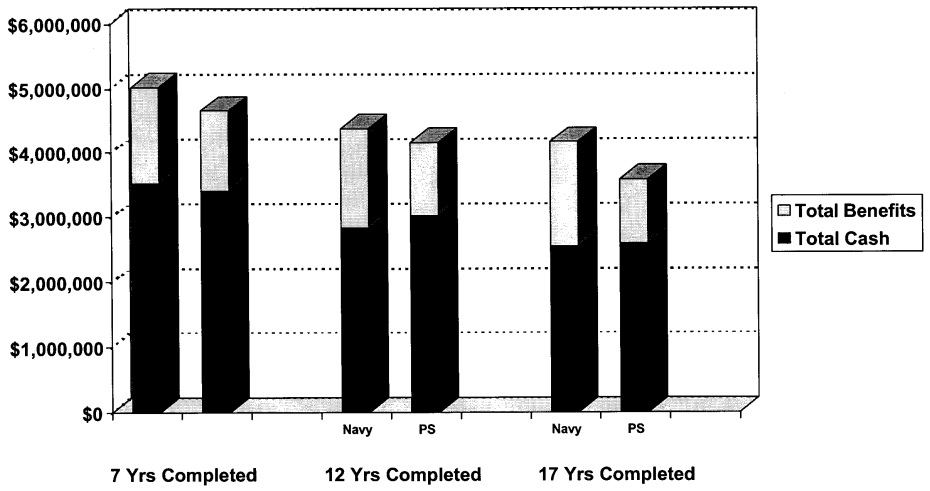
Current Annual Compensation



Industrial/Occupational Medicine

Present Value of Future Compensation & Benefits

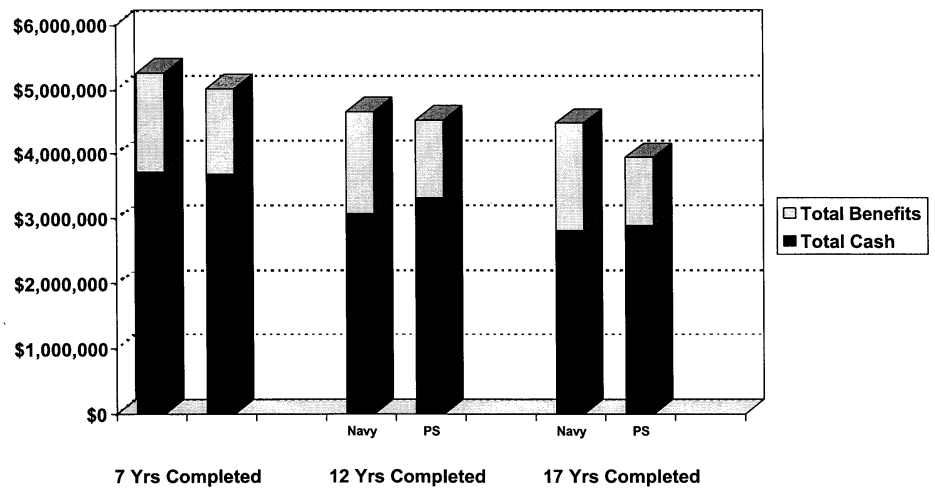
(Median Private Sector Salaries)



Industrial/Occupational Medicine

Present Value of Future Compensation & Benefits

(P75 Private Sector Salaries)



Ophthalmology

Current Annual Compensation

Years of Completed Navy Service	Compensation Element	Navy	Private Sector (50th Percentile)	Private Sector (75th Percentile)
7	RMC/Base Salary	$63,300	$163,700	$202,000
	Incentive Pays	$54,500		
	Total Cash	$117,800	$163,700	$202,000
	Total Benefits	$36,000	$55,200	$68,400
	Total Compensation	$153,800	$218,900	$270,400

Years of Completed Navy Service	Compensation Element	Navy	Private Sector (50th Percentile)	Private Sector (75th Percentile)
12	RMC/Base Salary	$77,600	$179,500	$216,400
	Incentive Pays	$57,000		
	Total Cash	$134,600	$179,500	$216,400
	Total Benefits	$42,900	$60,500	$72,900
	Total Compensation	$177,500	$240,000	$289,300

Years of Completed Navy Service	Compensation Element	Navy	Private Sector (50th Percentile)	Private Sector (75th Percentile)
17	RMC/Base Salary	$86,100	$195,200	$230,800
	Incentive Pays	$57,000		
	Total Cash	$143,100	$195,200	$230,800
	Total Benefits	$47,400	$65,700	$77,500
	Total Compensation	$190,500	$260,900	$308,300

Navy compensation is RMC, special and incentive pays, and benefits as of 1 July 2000

Private Sector compensation is total salary (including base and incentives) and benefits as of 1 July 2000

Ophthalmology

Present Value of Future Compensation and Benefits

Median Private Sector Salaries

Years of Completed Navy Service	Compensation Element	Navy Service	+ Second Career =	Total Navy Service	Private Sector (50th Percentile)
7	RMC/Base Salary Incentive Pays				
Separation after 7 yrs of service not an option due to service commitments for residency training.	Total Cash				
	Retirement + SBP Other Benefits				
	Total Benefits				
	Total Compensation			**N/A**	**N/A**

Years of Completed Navy Service	Compensation Element	Navy Service	+ Second Career =	Total Navy Service	Private Sector (50th Percentile)
12	RMC/Base Salary Incentive Pays	$628,100 $398,100	$2,576,700	$3,204,800 $398,100	$3,781,600
	Total Cash	$1,026,200	$2,576,700	$3,602,900	$3,781,600
	Retirement + SBP Other Benefits	$550,800 $179,200	$544,700 $570,800	$1,095,500 $750,000	$776,300 $765,500
	Total Benefits	$730,000	$1,115,500	$1,845,500	$1,541,800
	Total Compensation	$1,756,200	$3,692,200	$5,448,400	$5,323,400

Years of Completed Navy Service	Compensation Element	Navy Service	+ Second Career =	Total Navy Service	Private Sector (50th Percentile)
17	RMC/Base Salary Incentive Pays	$273,900 $164,300	$2,949,100	$3,223,000 $164,300	$3,464,000
	Total Cash	$438,200	$2,949,100	$3,387,300	$3,464,000
	Retirement + SBP Other Benefits	$674,000 $76,100	$618,500 $607,200	$1,292,500 $683,300	$716,900 $693,800
	Total Benefits	$750,100	$1,225,700	$1,975,800	$1,410,700
	Total Compensation	$1,188,300	$4,174,800	$5,363,100	$4,874,700

Navy compensation is RMC, special and incentive pays, and benefits as of 1 July 2000

Private Sector compensation is total salary (including base and incentives) and benefits as of 1 July 2000

Ophthalmology

Present Value of Future Compensation and Benefits

P75 Private Sector Salaries

Years of Completed Navy Service	Compensation Element	Navy Service	+ Second Career =	Total Navy Service	Private Sector (75th Percentile)
7	RMC/Base Salary Incentive Pays				
Separation after 7 yrs of service not an option due to service commitments for residency training.	Total Cash				
	Retirement + SBP Other Benefits				
	Total Benefits				
	Total Compensation			**N/A**	**N/A**

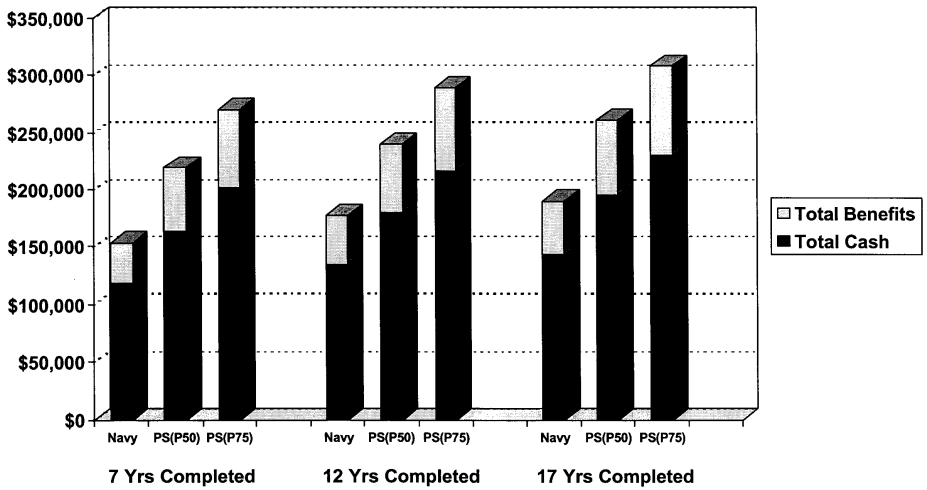
Years of Completed Navy Service	Compensation Element	Navy Service	+ Second Career =	Total Navy Service	Private Sector (75th Percentile)
12	RMC/Base Salary Incentive Pays	$628,100 $398,100	$3,036,700	$3,664,800 $398,100	$4,559,900
	Total Cash	$1,026,200	$3,036,700	$4,062,900	$4,559,900
	Retirement + SBP Other Benefits	$550,800 $179,200	$604,400 $655,100	$1,155,200 $834,300	$861,000 $911,400
	Total Benefits	$730,000	$1,259,500	$1,989,500	$1,772,400
	Total Compensation	$1,756,200	$4,296,200	$6,052,400	$6,332,300

Years of Completed Navy Service	Compensation Element	Navy Service	+ Second Career =	Total Navy Service	Private Sector (75th Percentile)
17	RMC/Base Salary Incentive Pays	$273,900 $164,300	$3,459,500	$3,733,400 $164,300	$4,095,900
	Total Cash	$438,200	$3,459,500	$3,897,700	$4,095,900
	Retirement + SBP Other Benefits	$674,000 $76,100	$685,100 $700,100	$1,359,100 $776,200	$794,000 $809,900
	Total Benefits	$750,100	$1,385,200	$2,135,300	$1,603,900
	Total Compensation	$1,188,300	$4,844,700	$6,033,000	$5,699,800

Navy compensation is RMC, special and incentive pays, and benefits as of 1 July 2000

Private Sector compensation is total salary (including base and incentives) and benefits as of 1 July 2000

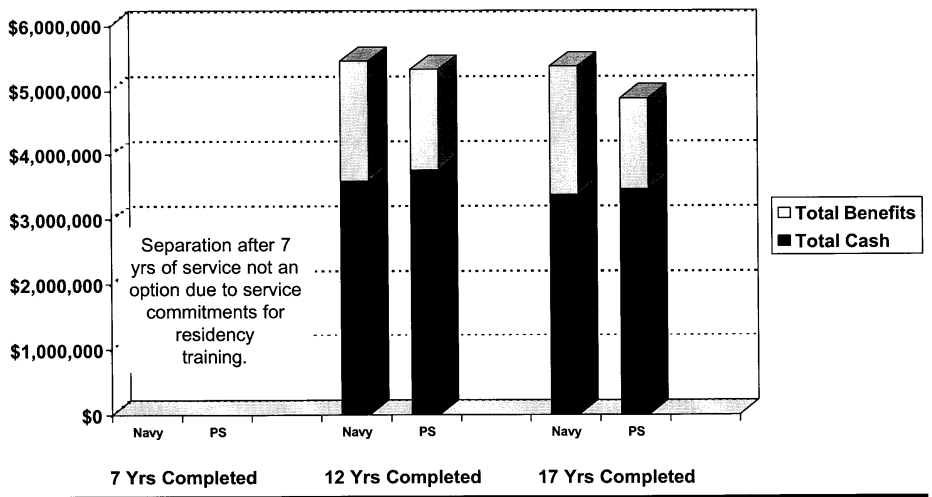
Ophthalmology
Current Annual Compensation



Ophthalmology

Present Value of Future Compensation & Benefits

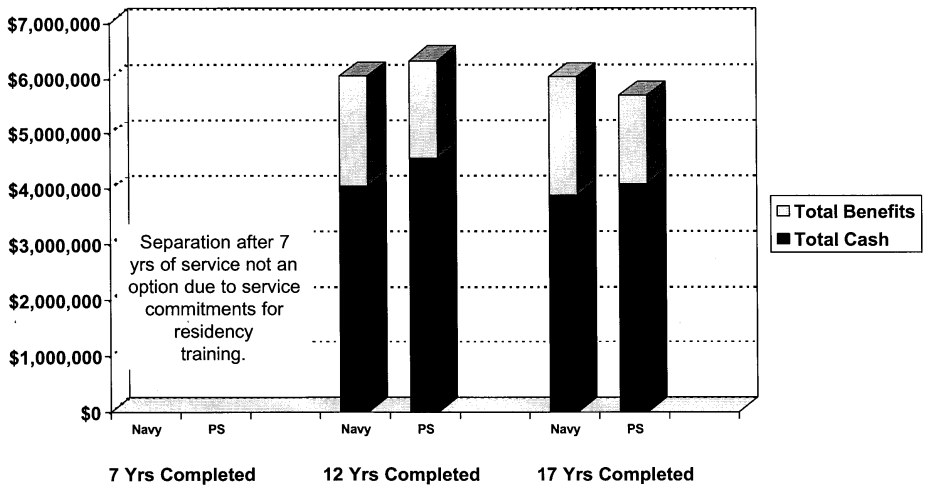
(Median Private Sector Salaries)



Ophthalmology

Present Value of Future Compensation & Benefits

(P75 Private Sector Salaries)



Orthopedic Surgery

Current Annual Compensation

Years of Completed Navy Service	Compensation Element	Navy	Private Sector (50th Percentile)	Private Sector (75th Percentile)
7	RMC/Base Salary	$63,300	$232,900	$270,700
	Incentive Pays	$62,500		
	Total Cash	$125,800	$232,900	$270,700
	Total Benefits	$36,000	$75,300	$85,000
	Total Compensation	$161,800	$308,200	$355,700

Years of Completed Navy Service	Compensation Element	Navy	Private Sector (50th Percentile)	Private Sector (75th Percentile)
12	RMC/Base Salary	$77,600	$244,600	$279,200
	Incentive Pays	$75,000		
	Total Cash	$152,600	$244,600	$279,200
	Total Benefits	$42,900	$79,300	$87,500
	Total Compensation	$195,500	$323,900	$366,700

Years of Completed Navy Service	Compensation Element	Navy	Private Sector (50th Percentile)	Private Sector (75th Percentile)
17	RMC/Base Salary	$86,100	$256,300	$287,700
	Incentive Pays	$65,000		
	Total Cash	$151,100	$256,300	$287,700
	Total Benefits	$47,400	$83,300	$90,100
	Total Compensation	$198,500	$339,600	$377,800

Navy compensation is RMC, special and incentive pays, and benefits as of 1 July 2000

Private Sector compensation is total salary (including base and incentives) and benefits as of 1 July 2000

Orthopedic Surgery

Present Value of Future Compensation and Benefits

Median Private Sector Salaries

Years of Completed Navy Service	Compensation Element	Navy Service	+ Second Career =	Total Navy Service	Private Sector (50th Percentile)
7	RMC/Base Salary				
	Incentive Pays				
Separation after 7 yrs of service not an option due to service commitments for residency training.	Total Cash				
	Retirement + SBP				
	Other Benefits				
	Total Benefits				
	Total Compensation			N/A	N/A

Years of Completed Navy Service	Compensation Element	Navy Service	+ Second Career =	Total Navy Service	Private Sector (50th Percentile)
12	RMC/Base Salary	$628,100	$3,395,700	$4,023,800	$5,206,100
	Incentive Pays	$498,500		$498,500	
	Total Cash	$1,126,600	$3,395,700	$4,522,300	$5,206,100
	Retirement + SBP	$550,800	$651,800	$1,202,600	$931,600
	Other Benefits	$179,200	$702,900	$882,100	$994,900
	Total Benefits	$730,000	$1,354,700	$2,084,700	$1,926,500
	Total Compensation	$1,856,600	$4,750,400	$6,607,000	$7,132,600

Years of Completed Navy Service	Compensation Element	Navy Service	+ Second Career =	Total Navy Service	Private Sector (50th Percentile)
17	RMC/Base Salary	$273,900	$3,845,900	$4,119,800	$4,585,400
	Incentive Pays	$187,400		$187,400	
	Total Cash	$461,300	$3,845,900	$4,307,200	$4,585,400
	Retirement + SBP	$674,000	$737,800	$1,411,800	$856,000
	Other Benefits	$76,100	$751,200	$827,300	$873,800
	Total Benefits	$750,100	$1,489,000	$2,239,100	$1,729,800
	Total Compensation	$1,211,400	$5,334,900	$6,546,300	$6,315,200

Navy compensation is RMC, special and incentive pays, and benefits as of 1 July 2000

Private Sector compensation is total salary (including base and incentives) and benefits as of 1 July 2000

Orthopedic Surgery

Present Value of Future Compensation and Benefits

P75 Private Sector Salaries

Years of Completed Navy Service	Compensation Element	Navy Service	+ Second Career =	Total Navy Service	Private Sector (75th Percentile)
7	RMC/Base Salary				
	Incentive Pays				
Separation after 7 yrs of service not an option due to service commitments for residency training.	Total Cash				
	Retirement + SBP				
	Other Benefits				
	Total Benefits				
	Total Compensation			**N/A**	**N/A**

Years of Completed Navy Service	Compensation Element	Navy Service	+ Second Career =	Total Navy Service	Private Sector (75th Percentile)
12	RMC/Base Salary	$628,100	$3,785,700	$4,413,800	$5,942,900
	Incentive Pays	$498,500		$498,500	
	Total Cash	$1,126,600	$3,785,700	$4,912,300	$5,942,900
	Retirement + SBP	$550,800	$657,700	$1,208,500	$940,100
	Other Benefits	$179,200	$747,200	$926,400	$1,091,400
	Total Benefits	$730,000	$1,404,900	$2,134,900	$2,031,500
	Total Compensation	$1,856,600	$5,190,600	$7,047,200	$7,974,400

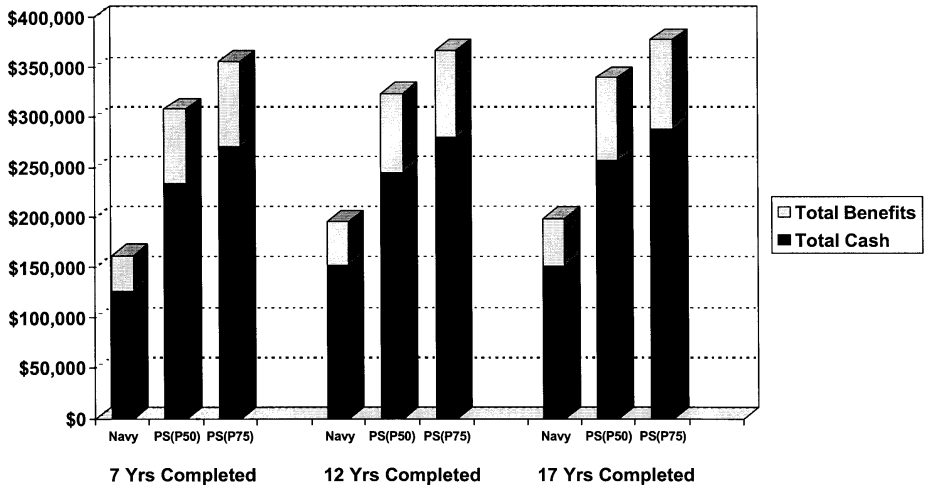
Years of Completed Navy Service	Compensation Element	Navy Service	+ Second Career =	Total Navy Service	Private Sector (75th Percentile)
17	RMC/Base Salary	$273,900	$4,279,500	$4,553,400	$5,146,800
	Incentive Pays	$187,400		$187,400	
	Total Cash	$461,300	$4,279,500	$4,740,800	$5,146,800
	Retirement + SBP	$674,000	$743,700	$1,417,700	$862,900
	Other Benefits	$76,100	$799,600	$875,700	$940,600
	Total Benefits	$750,100	$1,543,300	$2,293,400	$1,803,500
	Total Compensation	$1,211,400	$5,822,800	$7,034,200	$6,950,300

Navy compensation is RMC, special and incentive pays, and benefits as of 1 July 2000

Private Sector compensation is total salary (including base and incentives) and benefits as of 1 July 2000

Orthopedic Surgery

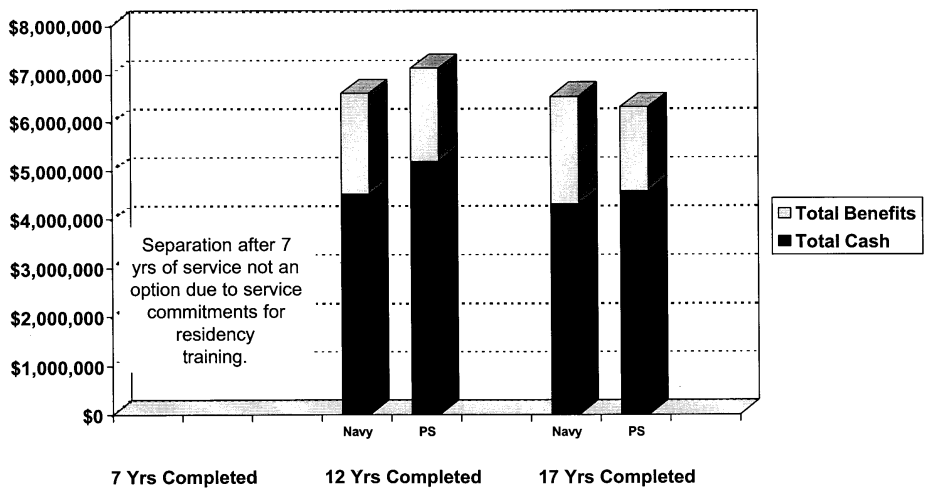
Current Annual Compensation



Orthopedic Surgery

Present Value of Future Compensation & Benefits

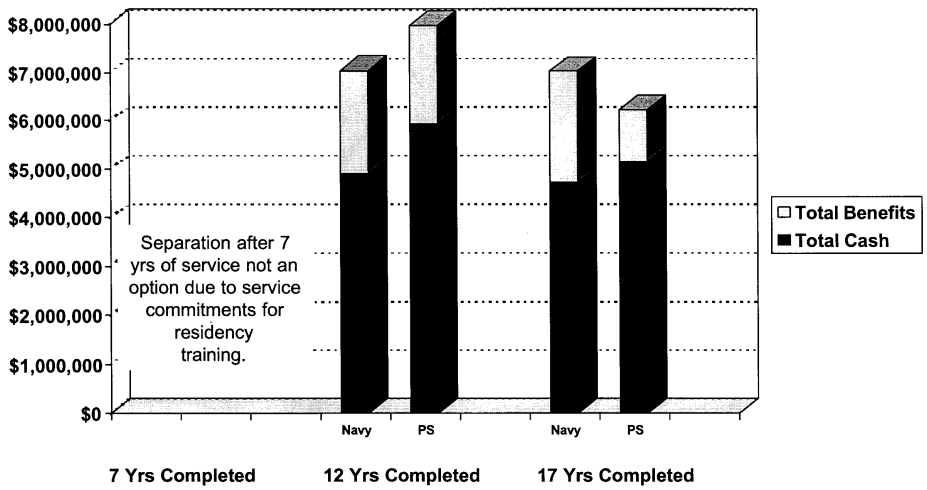
(Median Private Sector Salaries)



Orthopedic Surgery

Present Value of Future Compensation & Benefits

(P75 Private Sector Salaries)



Otolaryngology

Current Annual Compensation

Years of Completed Navy Service	Compensation Element	Navy	Private Sector (50th Percentile)	Private Sector (75th Percentile)
7 Navy physician is in residency training program at 7 years of service	RMC/Base Salary			
	Incentive Pays			
	Total Cash			
	Total Benefits			
	Total Compensation		**N/A**	**N/A**

Years of Completed Navy Service	Compensation Element	Navy	Private Sector (50th Percentile)	Private Sector (75th Percentile)
12	RMC/Base Salary	$77,600	$237,000	$251,100
	Incentive Pays	$66,000		
	Total Cash	$143,600	$237,000	$251,100
	Total Benefits	$42,900	$72,300	$85,500
	Total Compensation	$186,500	$309,300	$336,600

Years of Completed Navy Service	Compensation Element	Navy	Private Sector (50th Percentile)	Private Sector (75th Percentile)
17	RMC/Base Salary	$86,100	$232,100	$264,800
	Incentive Pays	$59,000		
	Total Cash	$145,100	$232,100	$264,800
	Total Benefits	$47,400	$72,400	$90,000
	Total Compensation	$192,500	$304,500	$354,800

Navy compensation is RMC, special and incentive pays, and benefits as of 1 July 2000

Private Sector compensation is total salary (including base and incentives) and benefits as of 1 July 2000

Otolaryngology

Present Value of Future Compensation and Benefits

Median Private Sector Salaries

Years of Completed Navy Service	Compensation Element	Navy Service	+ Second Career =	Total Navy Service	Private Sector (50th Percentile)
7	RMC/Base Salary Incentive Pays				
Separation after 7 yrs of service not an option because physician is in residency training.	Total Cash				
	Retirement + SBP Other Benefits				
	Total Benefits				
	Total Compensation			**N/A**	**N/A**

Years of Completed Navy Service	Compensation Element	Navy Service	+ Second Career =	Total Navy Service	Private Sector (50th Percentile)
12	RMC/Base Salary Incentive Pays				
Separation after 12 yrs of service not an option due to service commitments for residency training.	Total Cash				
	Retirement + SBP Other Benefits				
	Total Benefits				
	Total Compensation			**N/A**	**N/A**

Years of Completed Navy Service	Compensation Element	Navy Service	+ Second Career =	Total Navy Service	Private Sector (50th Percentile)
17	RMC/Base Salary Incentive Pays	$273,900 $170,100	$3,326,800	$3,600,700 $170,100	$4,118,400
	Total Cash	$444,000	$3,326,800	$3,770,800	$4,118,400
	Retirement + SBP Other Benefits	$674,000 $76,100	$522,000 $640,100	$1,196,000 $716,200	$607,200 $759,500
	Total Benefits	$750,100	$1,162,100	$1,912,200	$1,366,700
	Total Compensation	$1,194,100	$4,488,900	$5,683,000	$5,485,100

Navy compensation is RMC, special and incentive pays, and benefits as of 1 July 2000

Private Sector compensation is total salary (including base and incentives) and benefits as of 1 July 2000

Otolaryngology

Present Value of Future Compensation and Benefits

P75 Private Sector Salaries

Years of Completed Navy Service	Compensation Element	Navy Service	+ Second Career =	Total Navy Service	Private Sector (75th Percentile)
7	RMC/Base Salary				
	Incentive Pays				
Separation after 7 yrs of service not an option because physician is in residency training.	Total Cash				
	Retirement + SBP				
	Other Benefits				
	Total Benefits				
	Total Compensation			**N/A**	**N/A**

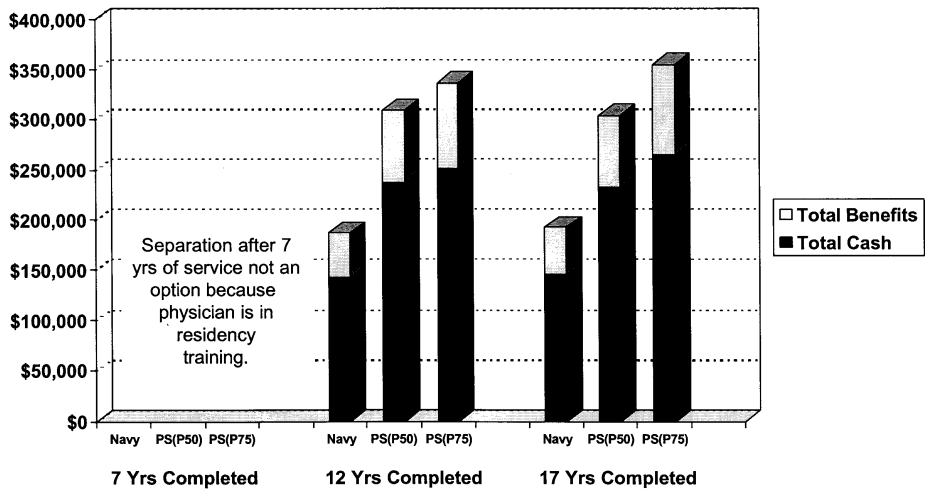
Years of Completed Navy Service	Compensation Element	Navy Service	+ Second Career =	Total Navy Service	Private Sector (75th Percentile)
12	RMC/Base Salary				
	Incentive Pays				
Separation after 12 yrs of service not an option due to service commitments for residency training.	Total Cash				
	Retirement + SBP				
	Other Benefits				
	Total Benefits				
	Total Compensation			**N/A**	**N/A**

Years of Completed Navy Service	Compensation Element	Navy Service	+ Second Career =	Total Navy Service	Private Sector (75th Percentile)
17	RMC/Base Salary	$273,900	$3,947,800	$4,221,700	$4,697,900
	Incentive Pays	$170,100		$170,100	
	Total Cash	$444,000	$3,947,800	$4,391,800	$4,697,900
	Retirement + SBP	$674,000	$767,300	$1,441,300	$890,900
	Other Benefits	$76,100	$800,600	$876,700	$932,900
	Total Benefits	$750,100	$1,567,900	$2,318,000	$1,823,800
	Total Compensation	$1,194,100	$5,515,700	$6,709,800	$6,521,700

Navy compensation is RMC, special and incentive pays, and benefits as of 1 July 2000

Private Sector compensation is total salary (including base and incentives) and benefits as of 1 July 2000

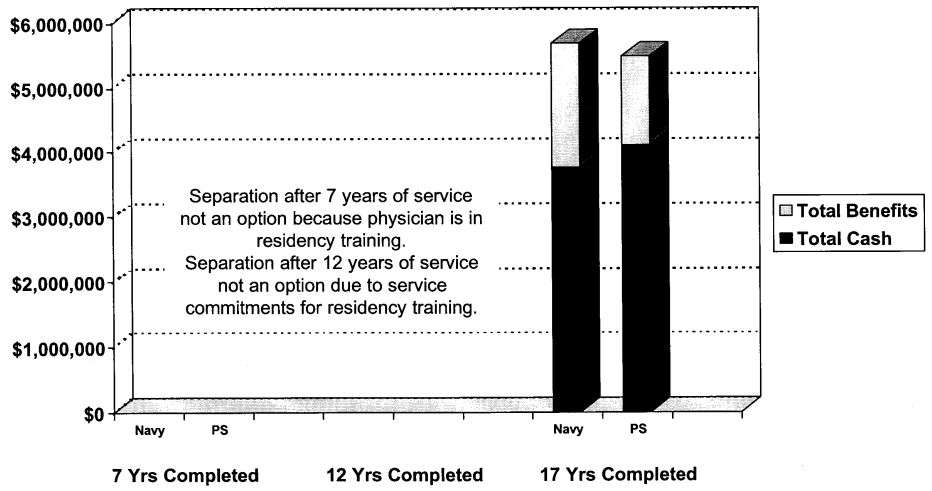
Otolaryngology
Current Annual Compensation



Otolaryngology

Present Value of Future Compensation & Benefits

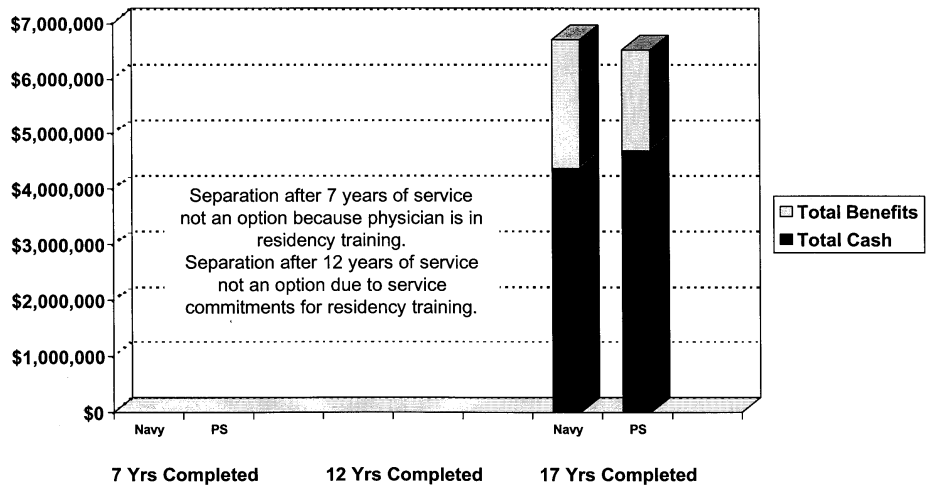
(Median Private Sector Salaries)



Otolaryngology

Present Value of Future Compensation & Benefits

(P75 Private Sector Salaries)



Pathology

Current Annual Compensation

Years of Completed Navy Service	Compensation Element	Navy	Private Sector (50th Percentile)	Private Sector (75th Percentile)
7	RMC/Base Salary	$63,300	$159,200	$217,000
	Incentive Pays	$42,500		
	Total Cash	$105,800	$159,200	$217,000
	Total Benefits	$36,000	$55,200	$73,600
	Total Compensation	$141,800	$214,400	$290,600

Years of Completed Navy Service	Compensation Element	Navy	Private Sector (50th Percentile)	Private Sector (75th Percentile)
12	RMC/Base Salary	$77,600	$169,500	$220,000
	Incentive Pays	$52,000		
	Total Cash	$129,600	$169,500	$220,000
	Total Benefits	$42,900	$58,400	$75,100
	Total Compensation	$172,500	$227,900	$295,100

Years of Completed Navy Service	Compensation Element	Navy	Private Sector (50th Percentile)	Private Sector (75th Percentile)
17	RMC/Base Salary	$86,100	$179,900	$222,900
	Incentive Pays	$45,000		
	Total Cash	$131,100	$179,900	$222,900
	Total Benefits	$47,400	$61,600	$76,700
	Total Compensation	$178,500	$241,500	$299,600

Navy compensation is RMC, special and incentive pays, and benefits as of 1 July 2000

Private Sector compensation is total salary (including base and incentives) and benefits as of 1 July 2000

Pathology

Present Value of Future Compensation and Benefits

Median Private Sector Salaries

Years of Completed Navy Service	Compensation Element	Navy Service	+ Second Career =	Total Navy Service	Private Sector (50th Percentile)
7	RMC/Base Salary Incentive Pays				
Separation after 7 yrs of service not an option due to service commitments for residency training.	Total Cash				
	Retirement + SBP Other Benefits				
	Total Benefits				
	Total Compensation			N/A	N/A

Years of Completed Navy Service	Compensation Element	Navy Service	+ Second Career =	Total Navy Service	Private Sector (50th Percentile)
12	RMC/Base Salary Incentive Pays	$628,100 $344,900	$2,453,600	$3,081,700 $344,900	$3,767,400
	Total Cash	$973,000	$2,453,600	$3,426,600	$3,767,400
	Retirement + SBP Other Benefits	$550,800 $179,200	$465,900 $554,500	$1,016,700 $733,700	$665,800 $775,500
	Total Benefits	$730,000	$1,020,400	$1,750,400	$1,441,300
	Total Compensation	$1,703,000	$3,474,000	$5,177,000	$5,208,700

Years of Completed Navy Service	Compensation Element	Navy Service	+ Second Career =	Total Navy Service	Private Sector (50th Percentile)
17	RMC/Base Salary Incentive Pays	$273,900 $129,700	$2,792,000	$3,065,900 $129,700	$3,333,100
	Total Cash	$403,600	$2,792,000	$3,195,600	$3,333,100
	Retirement + SBP Other Benefits	$674,000 $76,100	$527,800 $584,900	$1,201,800 $661,000	$612,400 $678,500
	Total Benefits	$750,100	$1,112,700	$1,862,800	$1,290,900
	Total Compensation	$1,153,700	$3,904,700	$5,058,400	$4,624,000

Navy compensation is RMC, special and incentive pays, and benefits as of 1 July 2000

Private Sector compensation is total salary (including base and incentives) and benefits as of 1 July 2000

Pathology

Present Value of Future Compensation and Benefits

P75 Private Sector Salaries

Years of Completed Navy Service	Compensation Element	Navy Service	+ Second Career =	Total Navy Service	Private Sector (75th Percentile)
7	RMC/Base Salary				
	Incentive Pays				
Separation after 7 yrs of service not an option due to service commitments for residency training.	Total Cash				
	Retirement + SBP				
	Other Benefits				
	Total Benefits				
	Total Compensation			**N/A**	**N/A**

Years of Completed Navy Service	Compensation Element	Navy Service	+ Second Career =	Total Navy Service	Private Sector (75th Percentile)
12	RMC/Base Salary	$628,100	$2,994,500	$3,622,600	$4,888,400
	Incentive Pays	$344,900		$344,900	
	Total Cash	$973,000	$2,994,500	$3,967,500	$4,888,400
	Retirement + SBP	$550,800	$522,500	$1,073,300	$746,300
	Other Benefits	$179,200	$662,400	$841,600	$981,900
	Total Benefits	$730,000	$1,184,900	$1,914,900	$1,728,200
	Total Compensation	$1,703,000	$4,179,400	$5,882,400	$6,616,600

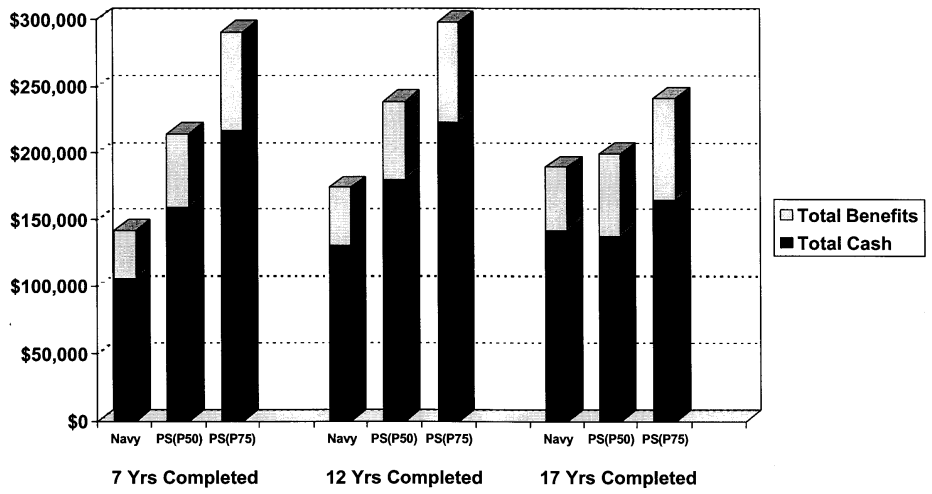
Years of Completed Navy Service	Compensation Element	Navy Service	+ Second Career =	Total Navy Service	Private Sector (75th Percentile)
17	RMC/Base Salary	$273,900	$3,384,300	$3,658,200	$4,130,800
	Incentive Pays	$129,700		$129,700	
	Total Cash	$403,600	$3,384,300	$3,787,900	$4,130,800
	Retirement + SBP	$674,000	$590,900	$1,264,900	$685,400
	Other Benefits	$76,100	$704,100	$780,200	$833,500
	Total Benefits	$750,100	$1,295,000	$2,045,100	$1,518,900
	Total Compensation	$1,153,700	$4,679,300	$5,833,000	$5,649,700

Navy compensation is RMC, special and incentive pays, and benefits as of 1 July 2000

Private Sector compensation is total salary (including base and incentives) and benefits as of 1 July 2000

Pathology

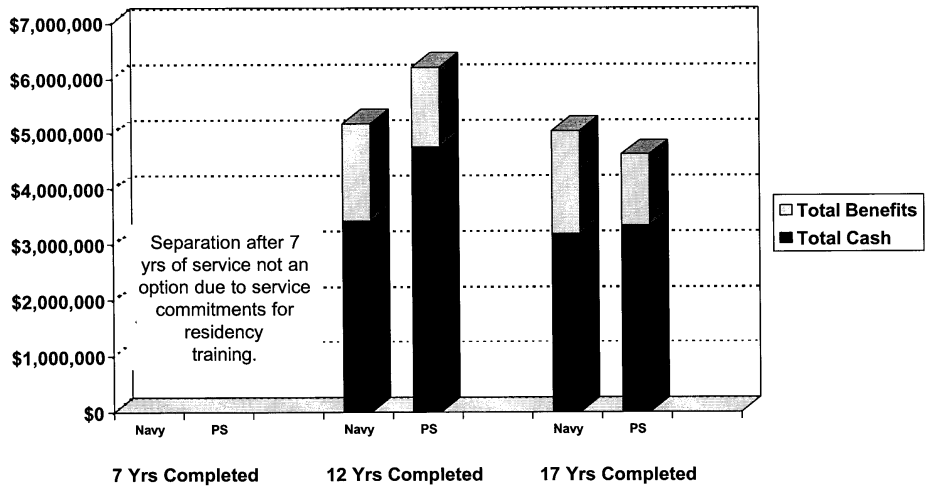
Current Annual Compensation



Pathology

Present Value of Future Compensation & Benefits

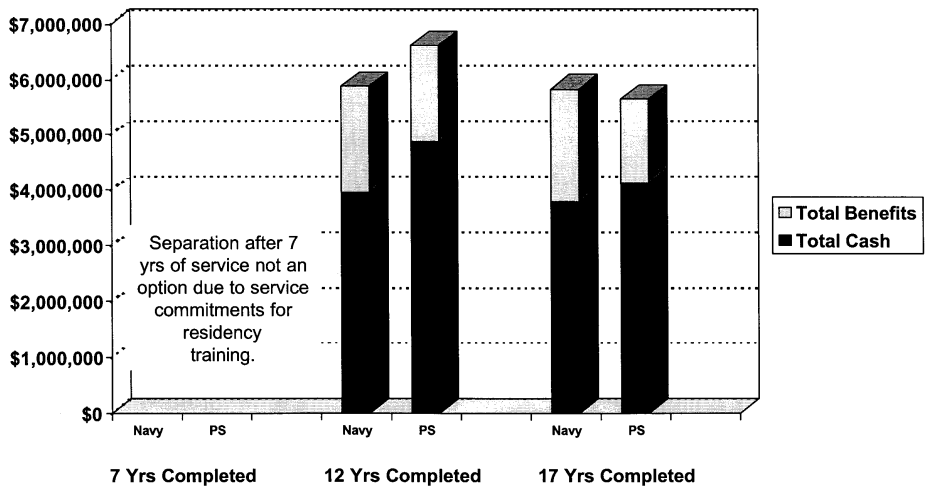
(Median Private Sector Salaries)



Pathology

Present Value of Future Compensation & Benefits

(P75 Private Sector Salaries)



Pediatric Primary Care

Current Annual Compensation

Years of Completed Navy Service	Compensation Element	Navy	Private Sector (50th Percentile)	Private Sector (75th Percentile)
7	RMC/Base Salary Incentive Pays	$63,300 $48,000	$130,600	$138,800
	Total Cash	$111,300	$130,600	$138,800
	Total Benefits	$36,000	$44,500	$46,700
	Total Compensation	$147,300	$175,100	$185,500

Years of Completed Navy Service	Compensation Element	Navy	Private Sector (50th Percentile)	Private Sector (75th Percentile)
12	RMC/Base Salary Incentive Pays	$77,600 $48,000	$137,700	$153,300
	Total Cash	$125,600	$137,700	$153,300
	Total Benefits	$42,900	$45,900	$51,200
	Total Compensation	$168,500	$183,600	$204,500

Years of Completed Navy Service	Compensation Element	Navy	Private Sector (50th Percentile)	Private Sector (75th Percentile)
17	RMC/Base Salary Incentive Pays	$86,100 $47,000	$144,900	$167,900
	Total Cash	$133,100	$144,900	$167,900
	Total Benefits	$47,400	$47,400	$55,700
	Total Compensation	$180,500	$192,300	$223,600

Navy compensation is RMC, special and incentive pays, and benefits as of 1 July 2000

Private Sector compensation is total salary (including base and incentives) and benefits as of 1 July 2000

Pediatric Primary Care

Present Value of Future Compensation and Benefits

Median Private Sector Salaries

Years of Completed Navy Service	Compensation Element	Navy Service	+Second Career =	Total Navy Service	Private Sector (50th Percentile)
7	RMC/Base Salary	$1,330,200	$1,604,400	$2,934,600	$2,946,400
	Incentive Pays	$492,900		$492,900	
	Total Cash	$1,823,100	$1,604,400	$3,427,500	$2,946,400
	Retirement + SBP	$488,300	$281,000	$769,300	$480,100
	Other Benefits	$244,000	$423,100	$667,100	$631,300
	Total Benefits	$732,300	$704,100	$1,436,400	$1,111,400
	Total Compensation	$2,555,400	$2,308,500	$4,863,900	$4,057,800

Years of Completed Navy Service	Compensation Element	Navy Service	+Second Career =	Total Navy Service	Private Sector (50th Percentile)
12	RMC/Base Salary	$628,100	$1,823,600	$2,451,700	$2,740,100
	Incentive Pays	$329,600		$329,600	
	Total Cash	$957,700	$1,823,600	$2,781,300	$2,740,100
	Retirement + SBP	$550,800	$317,900	$868,700	$455,600
	Other Benefits	$179,200	$420,400	$599,600	$568,600
	Total Benefits	$730,000	$738,300	$1,468,300	$1,024,200
	Total Compensation	$1,687,700	$2,561,900	$4,249,600	$3,764,300

Years of Completed Navy Service	Compensation Element	Navy Service	+Second Career =	Total Navy Service	Private Sector (50th Percentile)
17	RMC/Base Salary	$273,900	$2,071,600	$2,345,500	$2,452,200
	Incentive Pays	$133,600		$133,600	
	Total Cash	$407,500	$2,071,600	$2,479,100	$2,452,200
	Retirement + SBP	$674,000	$359,700	$1,033,700	$417,700
	Other Benefits	$76,100	$430,800	$506,900	$494,000
	Total Benefits	$750,100	$790,500	$1,540,600	$911,700
	Total Compensation	$1,157,600	$2,862,100	$4,019,700	$3,363,900

Navy compensation is RMC, special and incentive pays, and benefits as of 1 July 2000

Private Sector compensation is total salary (including base and incentives) and benefits as of 1 July 2000

Pediatric Primary Care

Present Value of Future Compensation and Benefits

P75 Private Sector Salaries

Years of Completed Navy Service	Compensation Element	Navy Service	+Second Career =	Total Navy Service	Private Sector (75th Percentile)
7	RMC/Base Salary	$1,330,200	$1,853,100	$3,183,300	$3,132,300
	Incentive Pays	$492,900		$492,900	
	Total Cash	$1,823,100	$1,853,100	$3,676,200	$3,132,300
	Retirement + SBP	$488,300	$389,800	$878,100	$662,600
	Other Benefits	$244,000	$474,000	$718,000	$658,800
	Total Benefits	$732,300	$863,800	$1,596,100	$1,321,400
	Total Compensation	$2,555,400	$2,716,900	$5,272,300	$4,453,700

Years of Completed Navy Service	Compensation Element	Navy Service	+Second Career =	Total Navy Service	Private Sector (75th Percentile)
12	RMC/Base Salary	$628,100	$2,128,700	$2,756,800	$3,050,700
	Incentive Pays	$329,600		$329,600	
	Total Cash	$957,700	$2,128,700	$3,086,400	$3,050,700
	Retirement + SBP	$550,800	$442,600	$993,400	$632,300
	Other Benefits	$179,200	$483,100	$662,300	$627,000
	Total Benefits	$730,000	$925,700	$1,655,700	$1,259,300
	Total Compensation	$1,687,700	$3,054,400	$4,742,100	$4,310,000

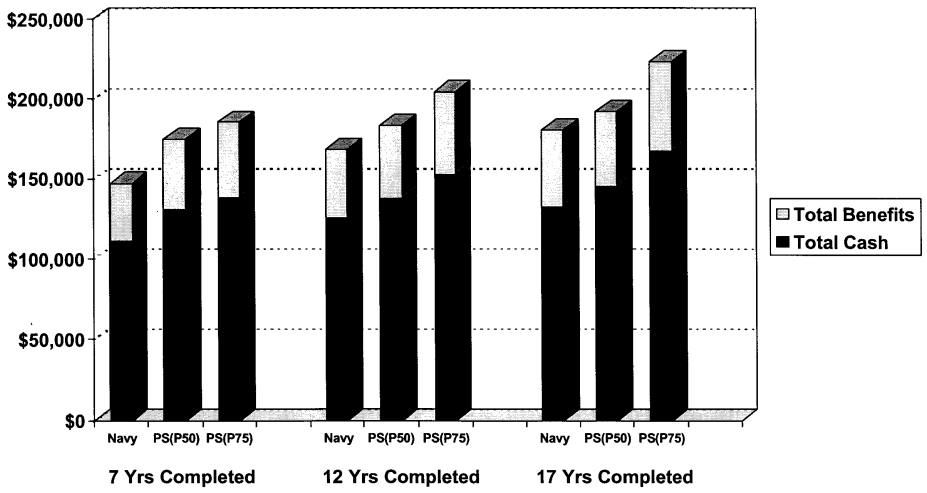
Years of Completed Navy Service	Compensation Element	Navy Service	+Second Career =	Total Navy Service	Private Sector (75th Percentile)
17	RMC/Base Salary	$273,900	$2,440,300	$2,714,200	$2,841,300
	Incentive Pays	$133,600		$133,600	
	Total Cash	$407,500	$2,440,300	$2,847,800	$2,841,300
	Retirement + SBP	$674,000	$502,200	$1,176,200	$582,600
	Other Benefits	$76,100	$507,100	$583,200	$572,700
	Total Benefits	$750,100	$1,009,300	$1,759,400	$1,155,300
	Total Compensation	$1,157,600	$3,449,600	$4,607,200	$3,996,600

Navy compensation is RMC, special and incentive pays, and benefits as of 1 July 2000

Private Sector compensation is total salary (including base and incentives) and benefits as of 1 July 2000

Pediatric Primary Care

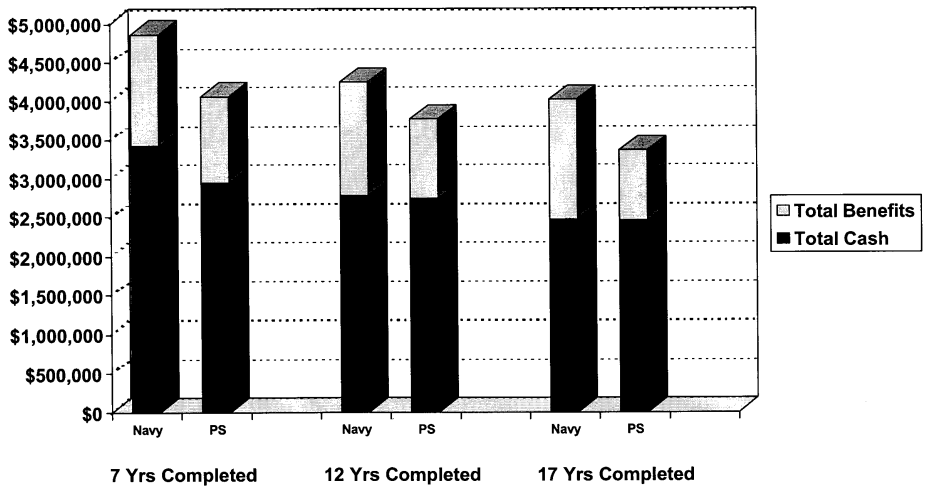
Current Annual Compensation



Pediatric Primary Care

Present Value of Future Compensation & Benefits

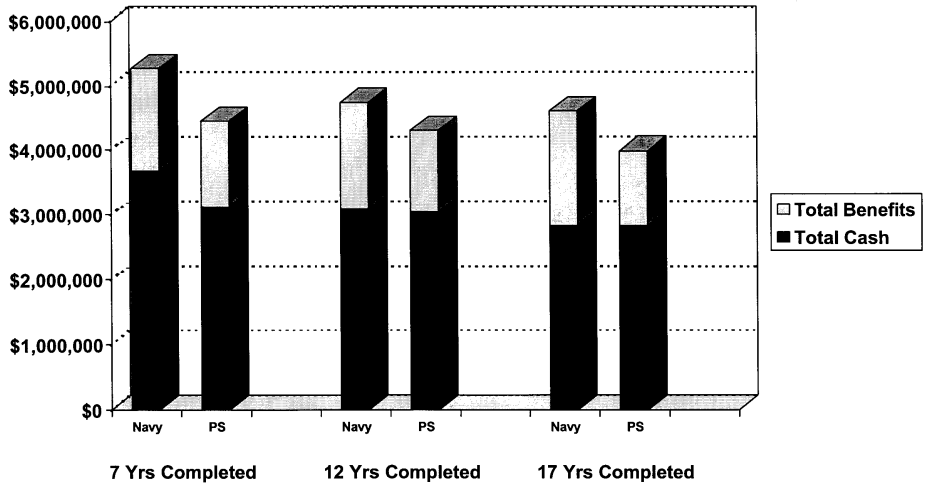
(Median Private Sector Salaries)



Pediatric Primary Care

Present Value of Future Compensation & Benefits

(P75 Private Sector Salaries)



Physical Medicine & Rehabilitation

Current Annual Compensation

Years of Completed Navy Service	Compensation Element	Navy	Private Sector (50th Percentile)	Private Sector (75th Percentile)
7	RMC/Base Salary Incentive Pays	$63,300 $40,000	$153,000	$170,300
	Total Cash	$103,300	$153,000	$170,300
	Total Benefits	$36,000	$51,200	$59,500
	Total Compensation	$139,300	$204,200	$229,800

Years of Completed Navy Service	Compensation Element	Navy	Private Sector (50th Percentile)	Private Sector (75th Percentile)
12	RMC/Base Salary Incentive Pays	$77,600 $50,000	$154,500	$178,300
	Total Cash	$127,600	$154,500	$178,300
	Total Benefits	$42,900	$51,900	$60,900
	Total Compensation	$170,500	$206,400	$239,200

Years of Completed Navy Service	Compensation Element	Navy	Private Sector (50th Percentile)	Private Sector (75th Percentile)
17	RMC/Base Salary Incentive Pays	$86,100 $49,000	$156,100	$186,400
	Total Cash	$135,100	$156,100	$186,400
	Total Benefits	$47,400	$52,600	$62,300
	Total Compensation	$182,500	$208,700	$248,700

Navy compensation is RMC, special and incentive pays, and benefits as of 1 July 2000

Private Sector compensation is total salary (including base and incentives) and benefits as of 1 July 2000

Physical Medicine & Rehabilitation

Present Value of Future Compensation and Benefits

Median Private Sector Salaries

Years of Completed Navy Service	Compensation Element	Navy Service	+ Second Career =	Total Navy Service	Private Sector (50th Percentile)
7	RMC/Base Salary				
	Incentive Pays				
Separation after 7 yrs of service not an option due to service commitments for residency training.	Total Cash				
	Retirement + SBP				
	Other Benefits				
	Total Benefits				
	Total Compensation			**N/A**	**N/A**

Years of Completed Navy Service	Compensation Element	Navy Service	+ Second Career =	Total Navy Service	Private Sector (50th Percentile)
12	RMC/Base Salary	$628,100	$2,017,600	$2,645,700	$3,256,300
	Incentive Pays	$339,200		$339,200	
	Total Cash	$967,300	$2,017,600	$2,984,900	$3,256,300
	Retirement + SBP	$550,800	$337,000	$887,800	$484,100
	Other Benefits	$179,200	$467,900	$647,100	$665,000
	Total Benefits	$730,000	$804,900	$1,534,900	$1,149,100
	Total Compensation	$1,697,300	$2,822,500	$4,519,800	$4,405,400

Years of Completed Navy Service	Compensation Element	Navy Service	+ Second Career =	Total Navy Service	Private Sector (50th Percentile)
17	RMC/Base Salary	$273,900	$2,279,400	$2,553,300	$2,770,000
	Incentive Pays	$132,900		$132,900	
	Total Cash	$406,800	$2,279,400	$2,686,200	$2,770,000
	Retirement + SBP	$674,000	$380,800	$1,054,800	$442,700
	Other Benefits	$76,100	$483,700	$559,800	$564,600
	Total Benefits	$750,100	$864,500	$1,614,600	$1,007,300
	Total Compensation	$1,156,900	$3,143,900	$4,300,800	$3,777,300

Navy compensation is RMC, special and incentive pays, and benefits as of 1 July 2000

Private Sector compensation is total salary (including base and incentives) and benefits as of 1 July 2000

Physical Medicine & Rehabilitation

Present Value of Future Compensation and Benefits

P75 Private Sector Salaries

Years of Completed Navy Service	Compensation Element	Navy Service	+ Second Career =	Total Navy Service	Private Sector (75th Percentile)
7	RMC/Base Salary				
	Incentive Pays				
Separation after 7 yrs of service not an option due to service commitments for residency training.	Total Cash				
	Retirement + SBP				
	Other Benefits				
	Total Benefits				
	Total Compensation			N/A	N/A

Years of Completed Navy Service	Compensation Element	Navy Service	+ Second Career =	Total Navy Service	Private Sector (75th Percentile)
12	RMC/Base Salary	$628,100	$2,451,400	$3,079,500	$3,757,000
	Incentive Pays	$339,200		$339,200	
	Total Cash	$967,300	$2,451,400	$3,418,700	$3,757,000
	Retirement + SBP	$550,800	$417,100	$967,900	$597,700
	Other Benefits	$179,200	$540,100	$719,300	$770,600
	Total Benefits	$730,000	$957,200	$1,687,200	$1,368,300
	Total Compensation	$1,697,300	$3,408,600	$5,105,900	$5,125,300

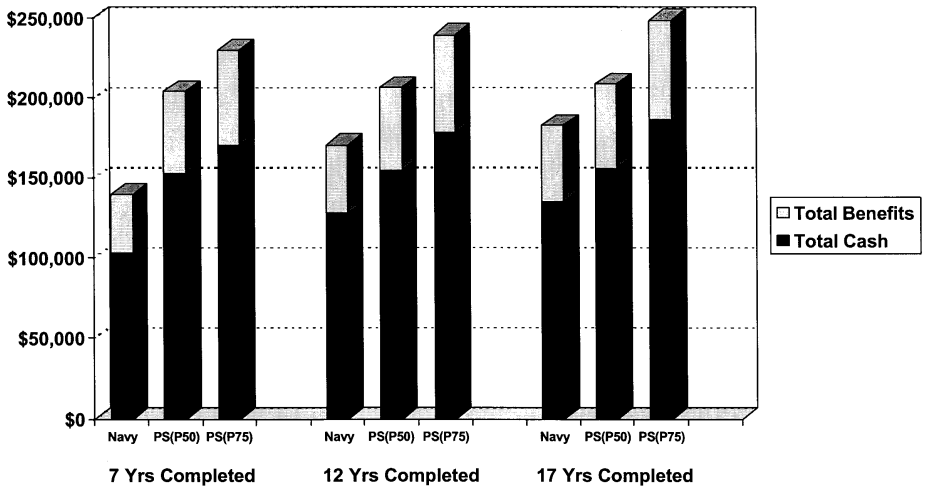
Years of Completed Navy Service	Compensation Element	Navy Service	+ Second Career =	Total Navy Service	Private Sector (75th Percentile)
17	RMC/Base Salary	$273,900	$2,775,000	$3,048,900	$3,307,900
	Incentive Pays	$132,900		$132,900	
	Total Cash	$406,800	$2,775,000	$3,181,800	$3,307,900
	Retirement + SBP	$674,000	$471,400	$1,145,400	$547,400
	Other Benefits	$76,100	$565,500	$641,600	$660,500
	Total Benefits	$750,100	$1,036,900	$1,787,000	$1,207,900
	Total Compensation	$1,156,900	$3,811,900	$4,968,800	$4,515,800

Navy compensation is RMC, special and incentive pays, and benefits as of 1 July 2000

Private Sector compensation is total salary (including base and incentives) and benefits as of 1 July 2000

Physical Medicine & Rehabilitation

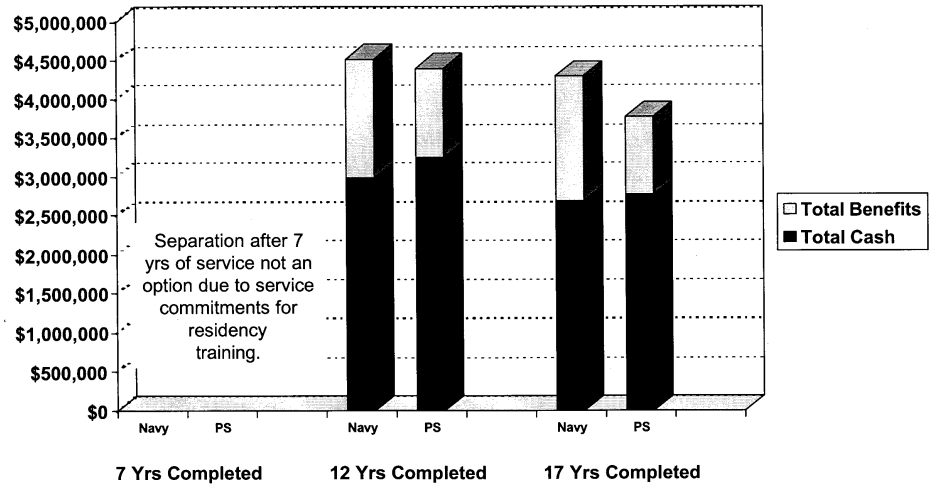
Current Annual Compensation



Physical Medicine & Rehabilitation

Present Value of Future Compensation & Benefits

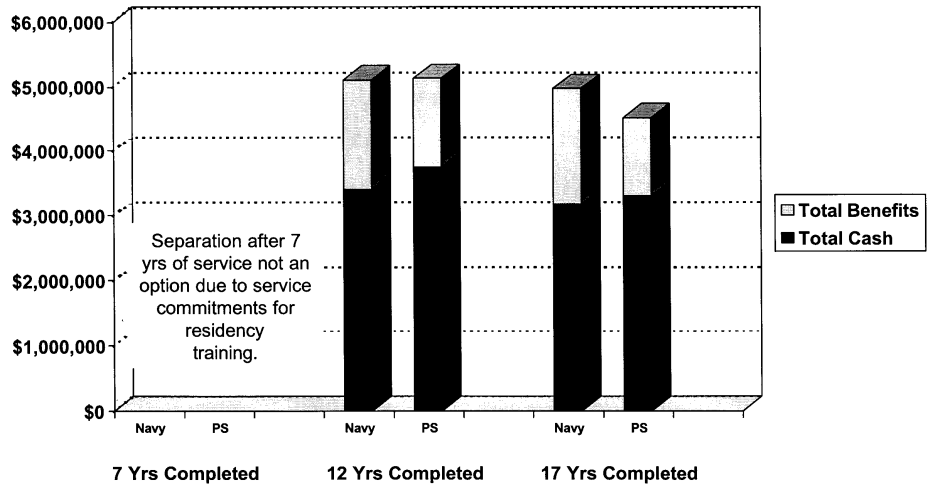
(Median Private Sector Salaries)



Physical Medicine & Rehabilitation

Present Value of Future Compensation & Benefits

(P75 Private Sector Salaries)



Plastic & Reconstructive Surgery

Current Annual Compensation

Years of Completed Navy Service	Compensation Element	Navy	Private Sector (50th Percentile)	Private Sector (75th Percentile)
7	RMC/Base Salary	$63,300	$179,100	$217,400
	Incentive Pays	$52,500		
	Total Cash	$115,800	$179,100	$217,400
	Total Benefits	$36,000	$53,400	$67,100
	Total Compensation	$151,800	$232,500	$284,500

Years of Completed Navy Service	Compensation Element	Navy	Private Sector (50th Percentile)	Private Sector (75th Percentile)
12	RMC/Base Salary	$77,600	$212,400	$302,600
	Incentive Pays	$73,000		
	Total Cash	$150,600	$212,400	$302,600
	Total Benefits	$42,900	$66,400	$104,100
	Total Compensation	$193,500	$278,800	$406,700

Years of Completed Navy Service	Compensation Element	Navy	Private Sector (50th Percentile)	Private Sector (75th Percentile)
17	RMC/Base Salary	$86,100	$227,300	$310,900
	Incentive Pays	$65,000		
	Total Cash	$151,100	$227,300	$310,900
	Total Benefits	$47,400	$71,900	$104,300
	Total Compensation	$198,500	$299,200	$415,200

Navy compensation is RMC, special and incentive pays, and benefits as of 1 July 2000

Private Sector compensation is total salary (including base and incentives) and benefits as of 1 July 2000

At 7 years of completed service, private sector compensation is for general surgery. At 12 and 17 years of completed service, private sector compensation is for plastic and reconstructive surgery.

Plastic & Reconstructive Surgery

Present Value of Future Compensation and Benefits

Median Private Sector Salaries

Years of Completed Navy Service	Compensation Element	Navy Service	+ Second Career =	Total Navy Service	Private Sector (50th Percentile)
7	RMC/Base Salary Incentive Pays				
Separation after 7 yrs of service not an option due to service commitments for residency training.	Total Cash				
	Retirement + SBP Other Benefits				
	Total Benefits				
	Total Compensation			N/A	N/A

Years of Completed Navy Service	Compensation Element	Navy Service	+ Second Career =	Total Navy Service	Private Sector (50th Percentile)
12	RMC/Base Salary Incentive Pays				
Separation after 12 yrs of service not an option due to service commitments for fellowship training.	Total Cash				
	Retirement + SBP Other Benefits				
	Total Benefits				
	Total Compensation			N/A	N/A

Years of Completed Navy Service	Compensation Element	Navy Service	+ Second Career =	Total Navy Service	Private Sector (50th Percentile)
17	RMC/Base Salary Incentive Pays	$273,900 $187,400	$3,553,100	$3,827,000 $187,400	$4,212,700
	Total Cash	$461,300	$3,553,100	$4,014,400	$4,212,700
	Retirement + SBP Other Benefits	$674,000 $76,100	$700,600 $683,100	$1,374,600 $759,200	$811,900 $784,500
	Total Benefits	$750,100	$1,383,700	$2,133,800	$1,596,400
	Total Compensation	$1,211,400	$4,936,800	$6,148,200	$5,809,100

Navy compensation is RMC, special and incentive pays, and benefits as of 1 July 2000

Private Sector compensation is total salary (including base and incentives) and benefits as of 1 July 2000

Plastic & Reconstructive Surgery

Present Value of Future Compensation and Benefits

P75 Private Sector Salaries

Years of Completed Navy Service	Compensation Element	Navy Service	+ Second Career =	Total Navy Service	Private Sector (75th Percentile)
7	RMC/Base Salary				
	Incentive Pays				
Separation after 7 yrs of service not an option due to service commitments for residency training.	Total Cash				
	Retirement + SBP				
	Other Benefits				
	Total Benefits				
	Total Compensation			**N/A**	**N/A**

Years of Completed Navy Service	Compensation Element	Navy Service	+ Second Career =	Total Navy Service	Private Sector (75th Percentile)
12	RMC/Base Salary				
	Incentive Pays				
Separation after 12 yrs of service not an option due to service commitments for fellowship training.	Total Cash				
	Retirement + SBP				
	Other Benefits				
	Total Benefits				
	Total Compensation			**N/A**	**N/A**

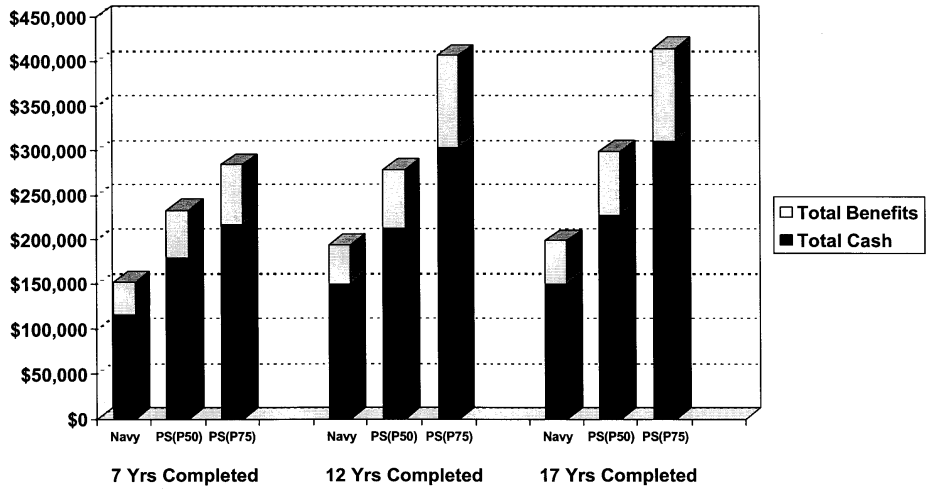
Years of Completed Navy Service	Compensation Element	Navy Service	+ Second Career =	Total Navy Service	Private Sector (75th Percentile)
17	RMC/Base Salary	$273,900	$4,756,600	$5,030,500	$5,761,100
	Incentive Pays	$187,400		$187,400	
	Total Cash	$461,300	$4,756,600	$5,217,900	$5,761,100
	Retirement + SBP	$674,000	$767,900	$1,441,900	$889,800
	Other Benefits	$76,100	$928,600	$1,004,700	$1,117,400
	Total Benefits	$750,100	$1,696,500	$2,446,600	$2,007,200
	Total Compensation	$1,211,400	$6,453,100	$7,664,500	$7,768,300

Navy compensation is RMC, special and incentive pays, and benefits as of 1 July 2000

Private Sector compensation is total salary (including base and incentives) and benefits as of 1 July 2000

Plastic & Reconstructive Surgery

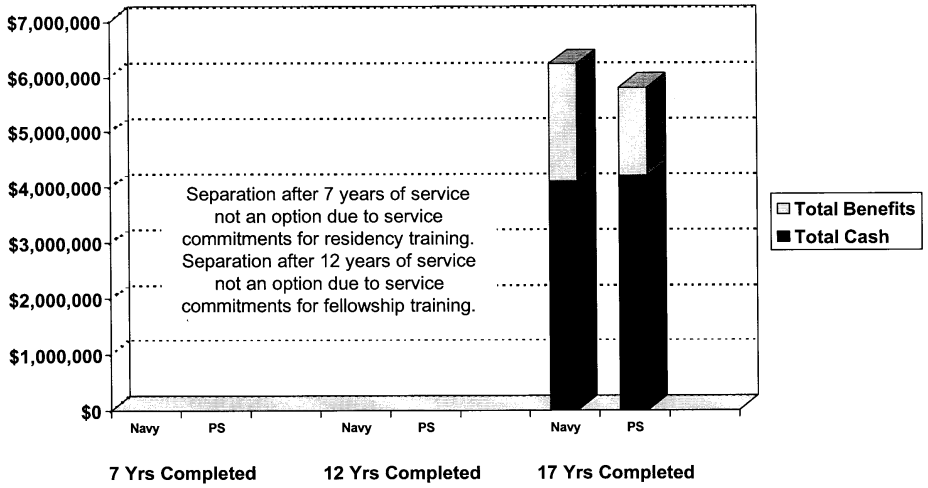
Current Annual Compensation



Plastic & Reconstructive Surgery

Present Value of Future Compensation & Benefits

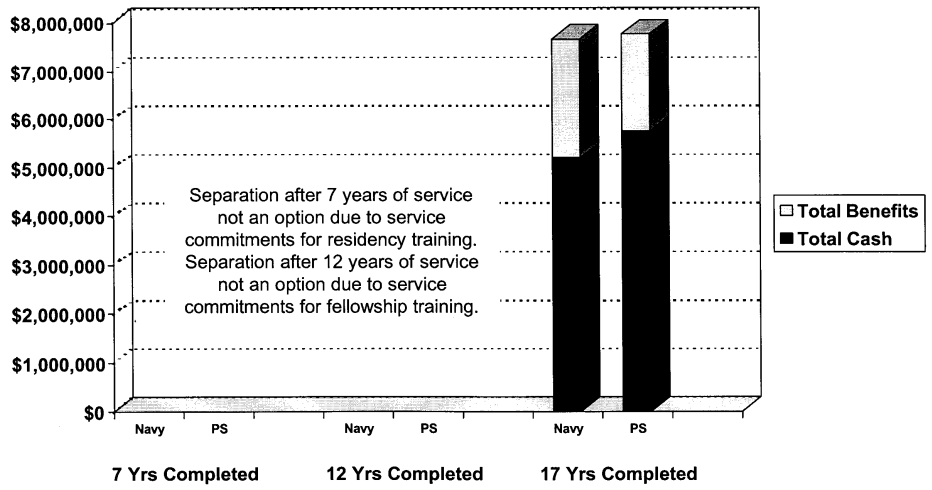
(Median Private Sector Salaries)



Plastic & Reconstructive Surgery

Present Value of Future Compensation & Benefits

(P75 Private Sector Salaries)



Psychiatry

Current Annual Compensation

Years of Completed Navy Service	Compensation Element	Navy	Private Sector (50th Percentile)	Private Sector (75th Percentile)
7	RMC/Base Salary	$63,300	$139,000	$148,200
	Incentive Pays	$43,000		
	Total Cash	$106,300	$139,000	$148,200
	Total Benefits	$36,000	$47,500	$50,700
	Total Compensation	$142,300	$186,500	$198,900

Years of Completed Navy Service	Compensation Element	Navy	Private Sector (50th Percentile)	Private Sector (75th Percentile)
12	RMC/Base Salary	$77,600	$145,900	$155,200
	Incentive Pays	$57,000		
	Total Cash	$134,600	$145,900	$155,200
	Total Benefits	$42,900	$49,800	$53,000
	Total Compensation	$177,500	$195,700	$208,200

Years of Completed Navy Service	Compensation Element	Navy	Private Sector (50th Percentile)	Private Sector (75th Percentile)
17	RMC/Base Salary	$86,100	$152,900	$162,300
	Incentive Pays	$53,000		
	Total Cash	$139,100	$152,900	$162,300
	Total Benefits	$47,400	$52,100	$55,400
	Total Compensation	$186,500	$205,000	$217,700

Navy compensation is RMC, special and incentive pays, and benefits as of 1 July 2000

Private Sector compensation is total salary (including base and incentives) and benefits as of 1 July 2000

Psychiatry

Present Value of Future Compensation and Benefits

Median Private Sector Salaries

Years of Completed Navy Service	Compensation Element	Navy Service	+ Second Career =	Total Navy Service	Private Sector (50th Percentile)
7	RMC/Base Salary Incentive Pays				
Separation after 7 yrs of service not an option due to service commitments for residency training.	Total Cash				
	Retirement + SBP Other Benefits				
	Total Benefits				
	Total Compensation			N/A	N/A

Years of Completed Navy Service	Compensation Element	Navy Service	+ Second Career =	Total Navy Service	Private Sector (50th Percentile)
12	RMC/Base Salary Incentive Pays	$628,100 $377,700	$2,001,900	$2,630,000 $377,700	$3,074,300
	Total Cash	$1,005,800	$2,001,900	$3,007,700	$3,074,300
	Retirement + SBP Other Benefits	$550,800 $179,200	$373,000 $468,400	$923,800 $647,600	$533,500 $641,000
	Total Benefits	$730,000	$841,400	$1,571,400	$1,174,500
	Total Compensation	$1,735,800	$2,843,300	$4,579,100	$4,248,800

Years of Completed Navy Service	Compensation Element	Navy Service	+ Second Career =	Total Navy Service	Private Sector (50th Percentile)
17	RMC/Base Salary Incentive Pays	$273,900 $143,500	$2,272,500	$2,546,400 $143,500	$2,712,100
	Total Cash	$417,400	$2,272,500	$2,689,900	$2,712,100
	Retirement + SBP Other Benefits	$674,000 $76,100	$422,300 $486,200	$1,096,300 $562,300	$490,100 $559,800
	Total Benefits	$750,100	$908,500	$1,658,600	$1,049,900
	Total Compensation	$1,167,500	$3,181,000	$4,348,500	$3,762,000

Navy compensation is RMC, special and incentive pays, and benefits as of 1 July 2000

Private Sector compensation is total salary (including base and incentives) and benefits as of 1 July 2000

Psychiatry

Present Value of Future Compensation and Benefits

P75 Private Sector Salaries

Years of Completed Navy Service	Compensation Element	Navy Service	+ Second Career =	Total Navy Service	Private Sector (75th Percentile)
7	RMC/Base Salary Incentive Pays				
Separation after 7 yrs of service not an option due to service commitments for residency training.	Total Cash				
	Retirement + SBP Other Benefits				
	Total Benefits				
	Total Compensation			**N/A**	**N/A**

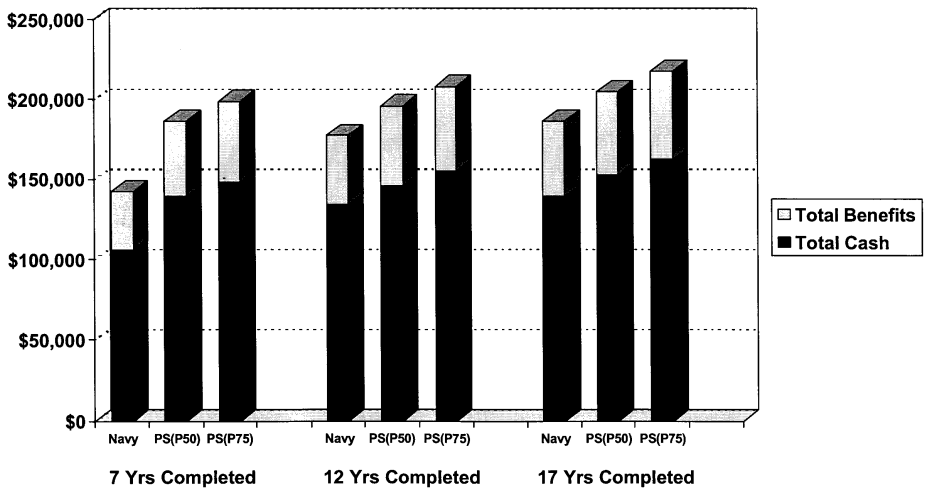
Years of Completed Navy Service	Compensation Element	Navy Service	+ Second Career =	Total Navy Service	Private Sector (75th Percentile)
12	RMC/Base Salary Incentive Pays	$628,100 $377,700	$2,123,900	$2,752,000 $377,700	$3,270,400
	Total Cash	$1,005,800	$2,123,900	$3,129,700	$3,270,400
	Retirement + SBP Other Benefits	$550,800 $179,200	$394,500 $491,900	$945,300 $671,100	$564,200 $678,800
	Total Benefits	$730,000	$886,400	$1,616,400	$1,243,000
	Total Compensation	$1,735,800	$3,010,300	$4,746,100	$4,513,400

Years of Completed Navy Service	Compensation Element	Navy Service	+ Second Career =	Total Navy Service	Private Sector (75th Percentile)
17	RMC/Base Salary Incentive Pays	$273,900 $143,500	$2,410,100	$2,684,000 $143,500	$2,879,100
	Total Cash	$417,400	$2,410,100	$2,827,500	$2,879,100
	Retirement + SBP Other Benefits	$674,000 $76,100	$446,700 $512,800	$1,120,700 $588,900	$518,300 $592,000
	Total Benefits	$750,100	$959,500	$1,709,600	$1,110,300
	Total Compensation	$1,167,500	$3,369,600	$4,537,100	$3,989,400

Navy compensation is RMC, special and incentive pays, and benefits as of 1 July 2000

Private Sector compensation is total salary (including base and incentives) and benefits as of 1 July 2000

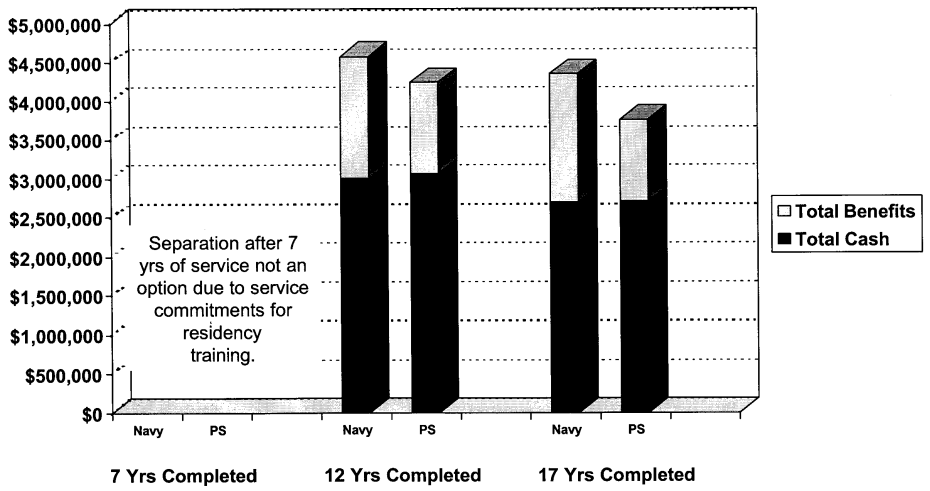
Psychiatry
Current Annual Compensation



Psychiatry

Present Value of Future Compensation & Benefits

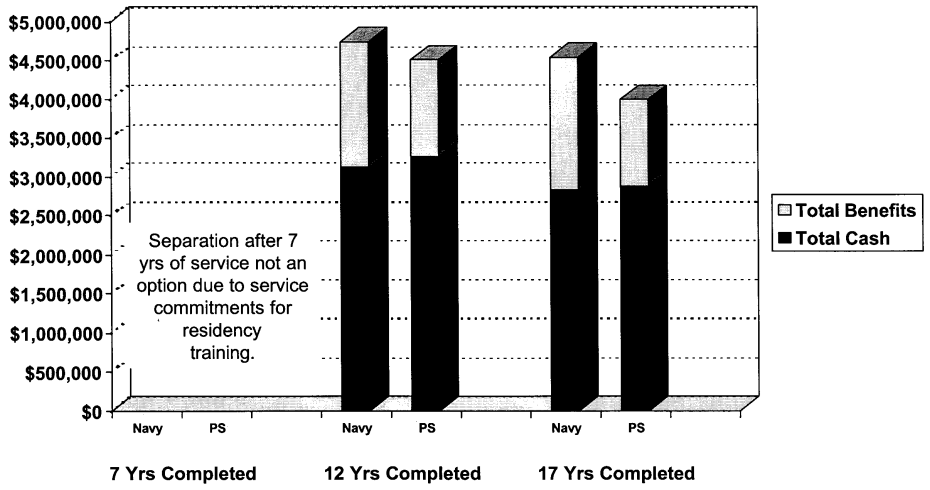
(Median Private Sector Salaries)



Psychiatry

Present Value of Future Compensation & Benefits

(P75 Private Sector Salaries)



Radiology (Diagnostic)

Current Annual Compensation

Years of Completed Navy Service	Compensation Element	Navy	Private Sector (50th Percentile)	Private Sector (75th Percentile)
7	RMC/Base Salary	$63,300	$206,000	$258,800
	Incentive Pays	$57,500		
	Total Cash	$120,800	$206,000	$258,800
	Total Benefits	$36,000	$67,600	$78,800
	Total Compensation	$156,800	$273,600	$337,600

Years of Completed Navy Service	Compensation Element	Navy	Private Sector (50th Percentile)	Private Sector (75th Percentile)
12	RMC/Base Salary	$77,600	$212,700	$260,800
	Incentive Pays	$67,000		
	Total Cash	$144,600	$212,700	$260,800
	Total Benefits	$42,900	$70,000	$80,000
	Total Compensation	$187,500	$282,700	$340,800

Years of Completed Navy Service	Compensation Element	Navy	Private Sector (50th Percentile)	Private Sector (75th Percentile)
17	RMC/Base Salary	$86,100	$219,700	$262,800
	Incentive Pays	$60,000		
	Total Cash	$146,100	$219,700	$262,800
	Total Benefits	$47,400	$72,500	$81,200
	Total Compensation	$193,500	$292,200	$344,000

Navy compensation is RMC, special and incentive pays, and benefits as of 1 July 2000

Private Sector compensation is total salary (including base and incentives) and benefits as of 1 July 2000

Radiology (Diagnostic)

Present Value of Future Compensation and Benefits

Median Private Sector Salaries

Years of Completed Navy Service	Compensation Element	Navy Service	+ Second Career =	Total Navy Service	Private Sector (50th Percentile)
7	RMC/Base Salary Incentive Pays				
Separation after 7 yrs of service not an option due to service commitments for residency training.	Total Cash				
	Retirement + SBP Other Benefits				
	Total Benefits				
	Total Compensation			**N/A**	**N/A**

Years of Completed Navy Service	Compensation Element	Navy Service	+ Second Career =	Total Navy Service	Private Sector (50th Percentile)
12	RMC/Base Salary Incentive Pays	$628,100 $449,700	$2,827,300	$3,455,400 $449,700	$4,399,500
	Total Cash	$1,077,800	$2,827,300	$3,905,100	$4,399,500
	Retirement + SBP Other Benefits	$550,800 $179,200	$525,200 $608,400	$1,076,000 $787,600	$752,100 $863,000
	Total Benefits	$730,000	$1,133,600	$1,863,600	$1,615,100
	Total Compensation	$1,807,800	$3,960,900	$5,768,700	$6,014,600

Years of Completed Navy Service	Compensation Element	Navy Service	+ Second Career =	Total Navy Service	Private Sector (50th Percentile)
17	RMC/Base Salary Incentive Pays	$273,900 $172,900	$3,202,300	$3,476,200 $172,900	$3,839,600
	Total Cash	$446,800	$3,202,300	$3,649,100	$3,839,600
	Retirement + SBP Other Benefits	$674,000 $76,100	$594,100 $644,100	$1,268,100 $720,200	$689,800 $750,400
	Total Benefits	$750,100	$1,238,200	$1,988,300	$1,440,200
	Total Compensation	$1,196,900	$4,440,500	$5,637,400	$5,279,800

Navy compensation is RMC, special and incentive pays, and benefits as of 1 July 2000

Private Sector compensation is total salary (including base and incentives) and benefits as of 1 July 2000

Radiology (Diagnostic)

Present Value of Future Compensation and Benefits

P75 Private Sector Salaries

Years of Completed Navy Service	Compensation Element	Navy Service	+ Second Career =	Total Navy Service	Private Sector (75th Percentile)
7	RMC/Base Salary				
	Incentive Pays				
Separation after 7 yrs of service not an option due to service commitments for residency training.	Total Cash				
	Retirement + SBP				
	Other Benefits				
	Total Benefits				
	Total Compensation			**N/A**	**N/A**

Years of Completed Navy Service	Compensation Element	Navy Service	+ Second Career =	Total Navy Service	Private Sector (75th Percentile)
12	RMC/Base Salary	$628,100	$3,347,900	$3,976,000	$5,394,600
	Incentive Pays	$449,700		$449,700	
	Total Cash	$1,077,800	$3,347,900	$4,425,700	$5,394,600
	Retirement + SBP	$550,800	$551,800	$1,102,600	$789,900
	Other Benefits	$179,200	$667,000	$846,200	$978,000
	Total Benefits	$730,000	$1,218,800	$1,948,800	$1,767,900
	Total Compensation	$1,807,800	$4,566,700	$6,374,500	$7,162,500

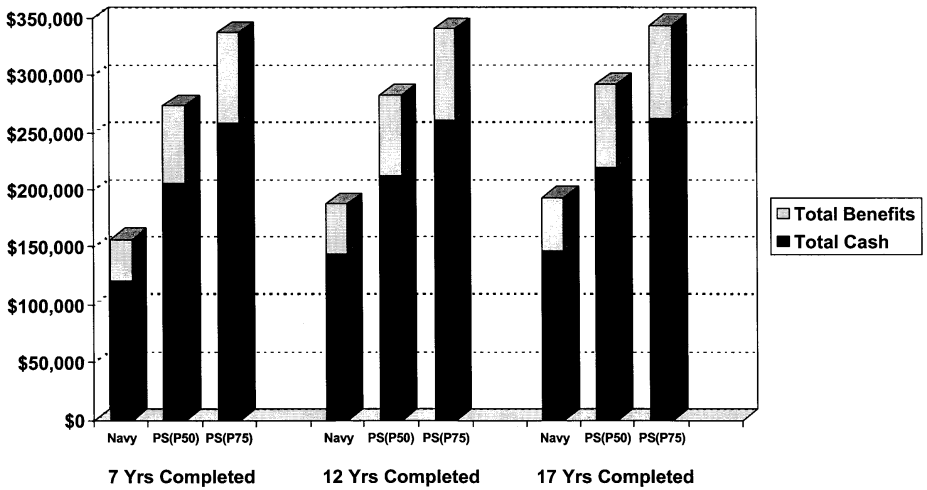
Years of Completed Navy Service	Compensation Element	Navy Service	+ Second Career =	Total Navy Service	Private Sector (75th Percentile)
17	RMC/Base Salary	$273,900	$3,782,200	$4,056,100	$4,593,400
	Incentive Pays	$172,900		$172,900	
	Total Cash	$446,800	$3,782,200	$4,229,000	$4,593,400
	Retirement + SBP	$674,000	$623,600	$1,297,600	$723,900
	Other Benefits	$76,100	$708,900	$785,000	$835,600
	Total Benefits	$750,100	$1,332,500	$2,082,600	$1,559,500
	Total Compensation	$1,196,900	$5,114,700	$6,311,600	$6,152,900

Navy compensation is RMC, special and incentive pays, and benefits as of 1 July 2000

Private Sector compensation is total salary (including base and incentives) and benefits as of 1 July 2000

Radiology (Diagnostic)

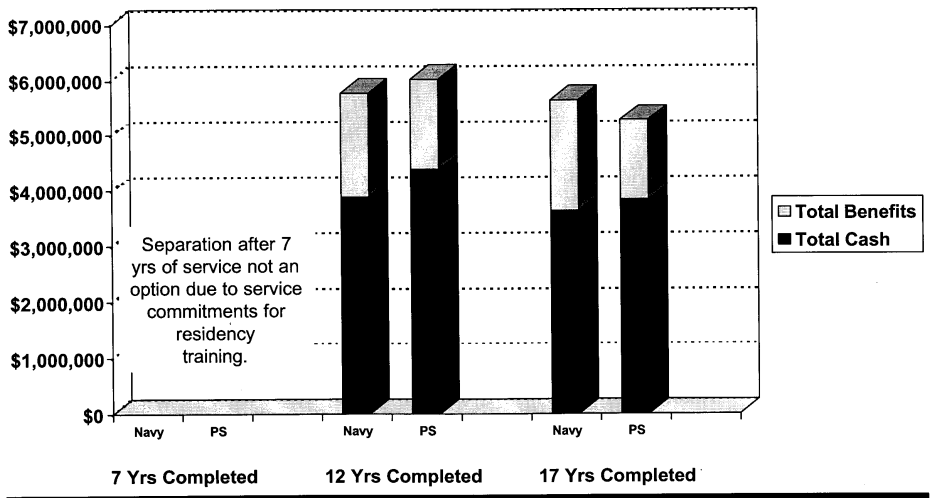
Current Annual Compensation



Radiology (Diagnostic)

Present Value of Future Compensation & Benefits

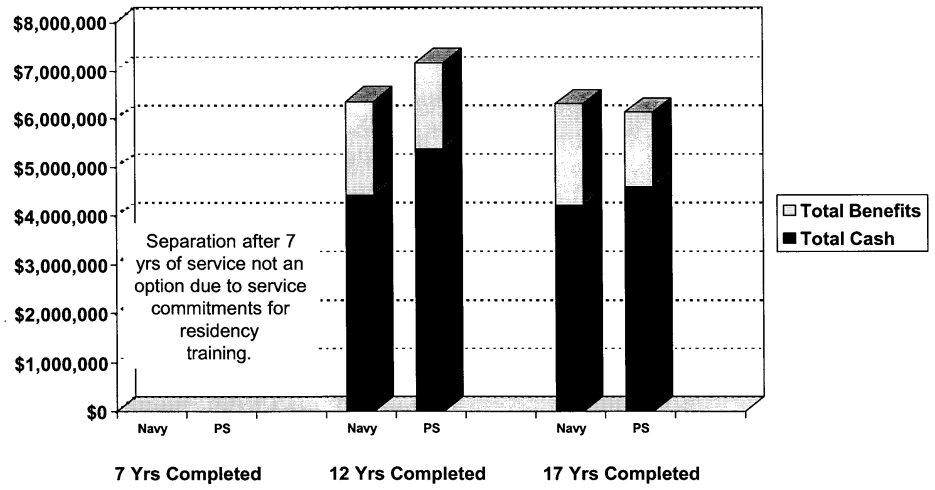
(Median Private Sector Salaries)



Radiology (Diagnostic)

Present Value of Future Compensation & Benefits

(P75 Private Sector Salaries)



Radiology (Therapeutic)

Current Annual Compensation

Years of Completed Navy Service	Compensation Element	Navy	Private Sector (50th Percentile)	Private Sector (75th Percentile)
7	RMC/Base Salary	$63,300	$211,900	$259,100
	Incentive Pays	$57,500		
	Total Cash	$120,800	$211,900	$259,100
	Total Benefits	$36,000	$70,000	$71,200
	Total Compensation	$156,800	$281,900	$330,300

Years of Completed Navy Service	Compensation Element	Navy	Private Sector (50th Percentile)	Private Sector (75th Percentile)
12	RMC/Base Salary	$77,600	$221,000	$271,300
	Incentive Pays	$67,000		
	Total Cash	$144,600	$221,000	$271,300
	Total Benefits	$42,900	$72,900	$75,000
	Total Compensation	$187,500	$293,900	$346,300

Years of Completed Navy Service	Compensation Element	Navy	Private Sector (50th Percentile)	Private Sector (75th Percentile)
17	RMC/Base Salary	$86,100	$230,600	$284,100
	Incentive Pays	$60,000		
	Total Cash	$146,100	$230,600	$284,100
	Total Benefits	$47,400	$76,000	$79,200
	Total Compensation	$193,500	$306,600	$363,300

Navy compensation is RMC, special and incentive pays, and benefits as of 1 July 2000

Private Sector compensation is total salary (including base and incentives) and benefits as of 1 July 2000

Radiology (Therapeutic)

Present Value of Future Compensation and Benefits

Median Private Sector Salaries

Years of Completed Navy Service	Compensation Element	Navy Service	+ Second Career =	Total Navy Service	Private Sector (50th Percentile)
7	RMC/Base Salary Incentive Pays				
Separation after 7 yrs of service not an option due to service commitments for residency training.	Total Cash				
	Retirement + SBP Other Benefits				
	Total Benefits				
	Total Compensation			**N/A**	**N/A**

Years of Completed Navy Service	Compensation Element	Navy Service	+ Second Career =	Total Navy Service	Private Sector (50th Percentile)
12	RMC/Base Salary Incentive Pays	$628,100 $449,700	$3,023,900	$3,652,000 $449,700	$4,656,800
	Total Cash	$1,077,800	$3,023,900	$4,101,700	$4,656,800
	Retirement + SBP Other Benefits	$550,800 $179,200	$572,600 $643,400	$1,123,400 $822,600	$819,100 $911,100
	Total Benefits	$730,000	$1,216,000	$1,946,000	$1,730,200
	Total Compensation	$1,807,800	$4,239,900	$6,047,700	$6,387,000

Years of Completed Navy Service	Compensation Element	Navy Service	+ Second Career =	Total Navy Service	Private Sector (50th Percentile)
17	RMC/Base Salary Incentive Pays	$273,900 $172,900	$3,425,800	$3,699,700 $172,900	$4,091,700
	Total Cash	$446,800	$3,425,800	$3,872,600	$4,091,700
	Retirement + SBP Other Benefits	$674,000 $76,100	$647,900 $683,700	$1,321,900 $759,800	$752,000 $795,700
	Total Benefits	$750,100	$1,331,600	$2,081,700	$1,547,700
	Total Compensation	$1,196,900	$4,757,400	$5,954,300	$5,639,400

Navy compensation is RMC, special and incentive pays, and benefits as of 1 July 2000

Private Sector compensation is total salary (including base and incentives) and benefits as of 1 July 2000

Radiology (Therapeutic)

Present Value of Future Compensation and Benefits

P75 Private Sector Salaries

Years of Completed Navy Service	Compensation Element	Navy Service	+ Second Career =	Total Navy Service	Private Sector (75th Percentile)
7	RMC/Base Salary Incentive Pays				
Separation after 7 yrs of service not an option due to service commitments for residency training.	Total Cash				
	Retirement + SBP Other Benefits				
	Total Benefits				
	Total Compensation			N/A	N/A

Years of Completed Navy Service	Compensation Element	Navy Service	+ Second Career =	Total Navy Service	Private Sector (75th Percentile)
12	RMC/Base Salary Incentive Pays	$628,100 $449,700	$3,731,900	$4,360,000 $449,700	$5,716,100
	Total Cash	$1,077,800	$3,731,900	$4,809,700	$5,716,100
	Retirement + SBP Other Benefits	$550,800 $179,200	$619,300 $668,900	$1,170,100 $848,100	$885,400 $936,000
	Total Benefits	$730,000	$1,288,200	$2,018,200	$1,821,400
	Total Compensation	$1,807,800	$5,020,100	$6,827,900	$7,537,500

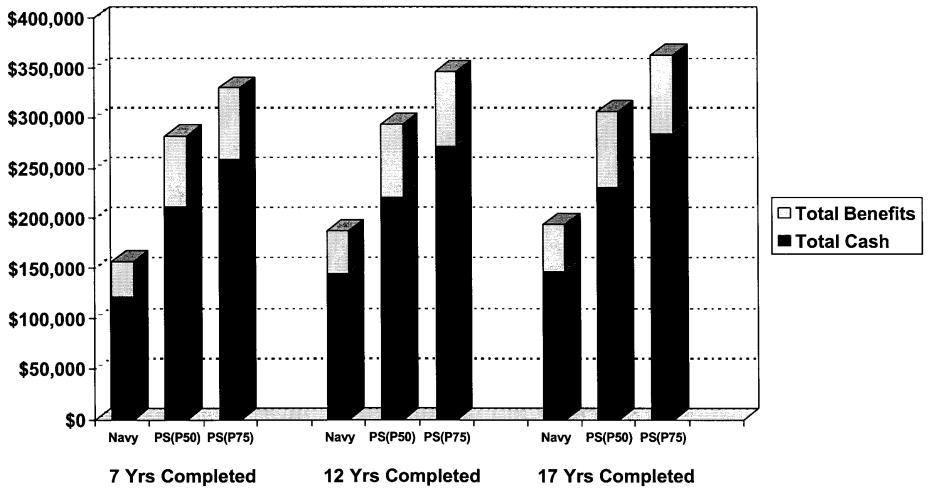
Years of Completed Navy Service	Compensation Element	Navy Service	+ Second Career =	Total Navy Service	Private Sector (75th Percentile)
17	RMC/Base Salary Incentive Pays	$273,900 $172,900	$4,229,500	$4,503,400 $172,900	$5,041,400
	Total Cash	$446,800	$4,229,500	$4,676,300	$5,041,400
	Retirement + SBP Other Benefits	$674,000 $76,100	$701,100 $713,300	$1,375,100 $789,400	$813,500 $826,400
	Total Benefits	$750,100	$1,414,400	$2,164,500	$1,639,900
	Total Compensation	$1,196,900	$5,643,900	$6,840,800	$6,681,300

Navy compensation is RMC, special and incentive pays, and benefits as of 1 July 2000

Private Sector compensation is total salary (including base and incentives) and benefits as of 1 July 2000

Radiology (Therapeutic)

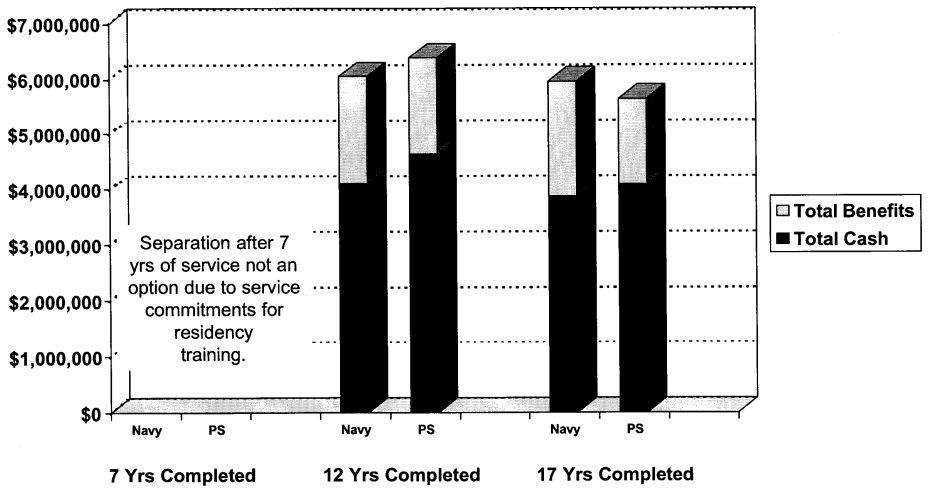
Current Annual Compensation



Radiology (Therapeutic)

Present Value of Future Compensation & Benefits

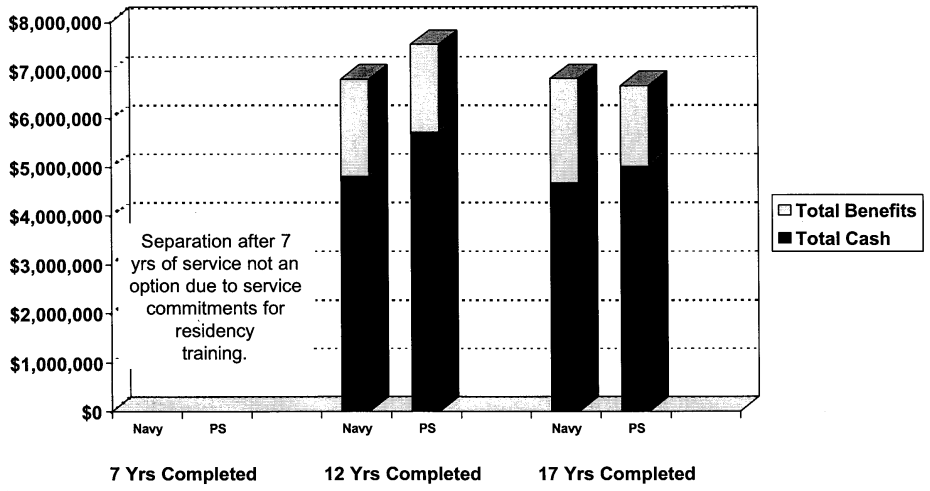
(Median Private Sector Salaries)



Radiology (Therapeutic)

Present Value of Future Compensation & Benefits

(P75 Private Sector Salaries)



Urology

Current Annual Compensation

Years of Completed Navy Service	Compensation Element	Navy	Private Sector (50th Percentile)	Private Sector (75th Percentile)
7 Navy physician is in residency training program at 7 years of service	RMC/Base Salary			
	Incentive Pays			
	Total Cash			
	Total Benefits			
	Total Compensation		N/A	N/A

Years of Completed Navy Service	Compensation Element	Navy	Private Sector (50th Percentile)	Private Sector (75th Percentile)
12	RMC/Base Salary	$77,600	$198,400	$221,500
	Incentive Pays	$64,000		
	Total Cash	$141,600	$198,400	$221,500
	Total Benefits	$42,900	$64,600	$71,300
	Total Compensation	$184,500	$263,000	$292,800

Years of Completed Navy Service	Compensation Element	Navy	Private Sector (50th Percentile)	Private Sector (75th Percentile)
17	RMC/Base Salary	$86,100	$208,000	$232,000
	Incentive Pays	$57,000		
	Total Cash	$143,100	$208,000	$232,000
	Total Benefits	$47,400	$67,800	$74,700
	Total Compensation	$190,500	$275,800	$306,700

Navy compensation is RMC, special and incentive pays, and benefits as of 1 July 2000

Private Sector compensation is total salary (including base and incentives) and benefits as of 1 July 2000

Urology

Present Value of Future Compensation and Benefits

Median Private Sector Salaries

Years of Completed Navy Service	Compensation Element	Navy Service	+ Second Career =	Total Navy Service	Private Sector (50th Percentile)
7	RMC/Base Salary Incentive Pays				
Separation after 7 yrs of service not an option because physician is in residency training.	Total Cash				
	Retirement + SBP Other Benefits				
	Total Benefits				
	Total Compensation			**N/A**	**N/A**

Years of Completed Navy Service	Compensation Element	Navy Service	+ Second Career =	Total Navy Service	Private Sector (50th Percentile)
12	RMC/Base Salary Incentive Pays				
Separation after 12 yrs of service not an option due to service commitments for residency training.	Total Cash				
	Retirement + SBP Other Benefits				
	Total Benefits				
	Total Compensation			**N/A**	**N/A**

Years of Completed Navy Service	Compensation Element	Navy Service	+ Second Career =	Total Navy Service	Private Sector (50th Percentile)
17	RMC/Base Salary Incentive Pays	$273,900 $164,300	$3,100,000	$3,373,900 $164,300	$3,691,400
	Total Cash	$438,200	$3,100,000	$3,538,200	$3,691,400
	Retirement + SBP Other Benefits	$674,000 $76,100	$586,000 $617,800	$1,260,000 $693,900	$679,900 $714,500
	Total Benefits	$750,100	$1,203,800	$1,953,900	$1,394,400
	Total Compensation	$1,188,300	$4,303,800	$5,492,100	$5,085,800

Navy compensation is RMC, special and incentive pays, and benefits as of 1 July 2000

Private Sector compensation is total salary (including base and incentives) and benefits as of 1 July 2000

Urology

Present Value of Future Compensation and Benefits

P75 Private Sector Salaries

Years of Completed Navy Service	Compensation Element	Navy Service	+ Second Career =	Total Navy Service	Private Sector (75th Percentile)
7	RMC/Base Salary Incentive Pays				
Separation after 7 yrs of service not an option because physician is in residency training.	Total Cash				
	Retirement + SBP Other Benefits				
	Total Benefits				
	Total Compensation			**N/A**	**N/A**

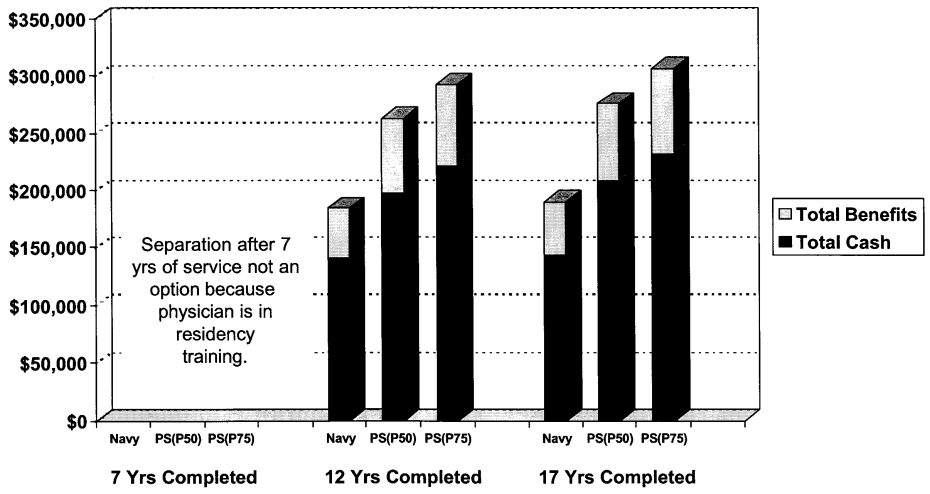
Years of Completed Navy Service	Compensation Element	Navy Service	+ Second Career =	Total Navy Service	Private Sector (75th Percentile)
12	RMC/Base Salary Incentive Pays				
Separation after 12 yrs of service not an option due to service commitments for residency training.	Total Cash				
	Retirement + SBP Other Benefits				
	Total Benefits				
	Total Compensation			**N/A**	**N/A**

Years of Completed Navy Service	Compensation Element	Navy Service	+ Second Career =	Total Navy Service	Private Sector (75th Percentile)
17	RMC/Base Salary Incentive Pays	$273,900 $164,300	$3,454,900	$3,728,800 $164,300	$4,116,400
	Total Cash	$438,200	$3,454,900	$3,893,100	$4,116,400
	Retirement + SBP Other Benefits	$674,000 $76,100	$639,300 $673,900	$1,313,300 $750,000	$741,500 $782,200
	Total Benefits	$750,100	$1,313,200	$2,063,300	$1,523,700
	Total Compensation	$1,188,300	$4,768,100	$5,956,400	$5,640,100

Navy compensation is RMC, special and incentive pays, and benefits as of 1 July 2000

Private Sector compensation is total salary (including base and incentives) and benefits as of 1 July 2000

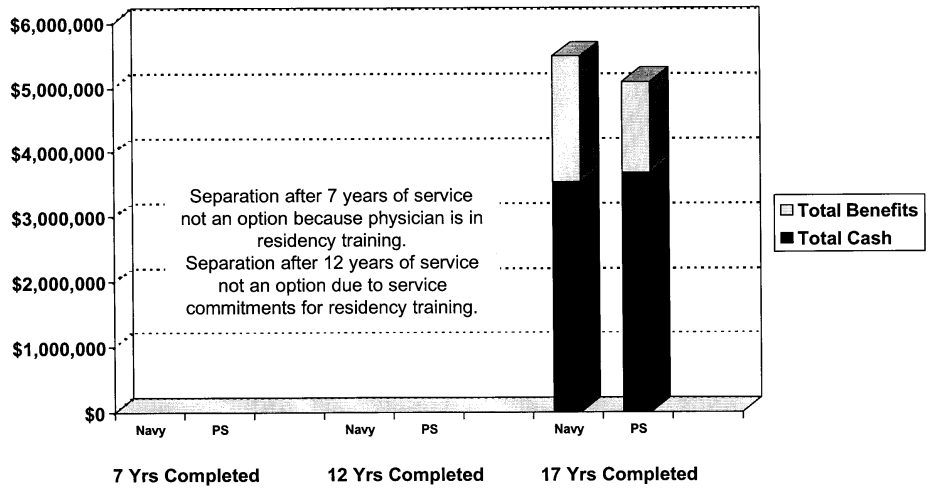
Urology
Current Annual Compensation



Urology

Present Value of Future Compensation & Benefits

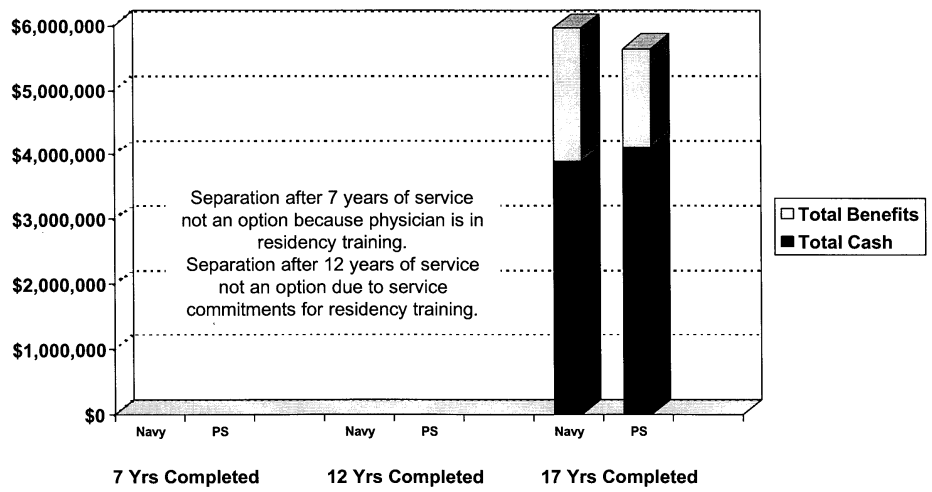
(Median Private Sector Salaries)



Urology

Present Value of Future Compensation & Benefits

(P75 Private Sector Salaries)



Appendix A: Assumptions

Career Profiles

Navy Physicians:

Navy physicians are assumed to enter active service at age 26 following completion of medical school. Residency and fellowship training are assumed to occur while on active duty.

Separate career profiles[1] are developed for each specialty in the study. These profiles represent the predominant or most typical experience in that specialty. All entering Navy physicians are assumed to serve one year of internship (GME-1) immediately upon entering active duty, followed by two years as a General Medical Officer (GMO). All specialty training is assumed to begin following the GMO tour. Table A-7 at the end of this Appendix illustrate the career profiles, training lengths, and training Active Duty Service Commitments (ADSCs) for each specialty.

All entering physicians are assumed to carry a four-year ADSC resulting from a four-year Armed Forces Health Professional Scholarship Program. This commitment is "worked down" beginning with the GMO tour. No active duty obligation is discharged when in GME-1 or residency training. Attending residency training produces additional ADSCs and these commitments are served concurrently with the remaining ADSC following completion of in-service residency training. For example, a Navy physician attending radiology residency training will enter the program with a two-year ADSC from the scholarship program subsidization, and will incur an additional four-year commitment from residency. However, after residency training, the remaining two-year service commitment from medical school is served concurrently with the four-year obligation from radiology training.

Table A-7 also indicates promotion points to O-4, O-5 and O-6. There are no ADSCs that would prohibit separation at any time following a promotion. However, current policy requires physicians to serve two years time in grade to be eligible for retirement. The separations modeled in this study (following 7, 12 and 17 years of service) are unaffected by promotions.

Private Sector Physicians:

[1] The Bureau of Medicine and Surgery (MED-OOMC) approved the career profiles, training lengths, active duty service commitments and specialty pays used in the study.

Private sector physicians are assumed to enter practice following completion of residency/specialty training. For total compensation purposes, private sector physicians are compared with Navy physicians having the same number of years of practice in the specialty.

For example, a Navy family practice physician with seven years of completed service (one year of GME-1, two years of GMO, two years of residency, and two years in a staff utilization tour) would be compared with a private sector family practice physician with two completed years of practice.

In the case of fellowship training, the Navy physician would be compared with the private sector internal medicine specialist through completion of fellowship training, then with the appropriate subspecialty, for example, cardiology. In this example, the Navy physician one year out of fellowship training would be compared with a private sector cardiologist with one year of practice.

Cash Compensation[2]

Navy Physicians:

Cash compensation for Navy physicians consists of Regular Military Compensation and incentive pays.

Regular Military Compensation (RMC). RMC is composed of Basic Pay, Basic Allowance for Housing, Basic Allowance for Subsistence, and the tax advantage accruing to the non-taxable nature of housing and subsistence allowances. Basic pay represents approximately 66 percent of RMC for an O-3 and approximately 75 percent of RMC for an O-6. The study was based on the 1 July 2000 RMC table, shown in Table A-7 at the end of this Appendix for the grade and year of service combinations in this study.

Incentive pays are Variable Special Pay (VSP), Additional Special Pay (ASP), Board Certification Pay (BCP), Incentive Special Pay (ISP) and Multi-year Special Pay (MSP). Incentive pays are assumed to be paid in annual installments based on specialty and year of service (as appropriate). Payments are at rates effective 1 October 1999. Because future increases in incentive pays are subject to legislation, the study assumes current payment levels remain unchanged.

Variable Special Pay (VSP). VSP varies by year of service. The payment amounts are the same for each specialty we examined and are shown in Table A-7.

Additional Special Pay (ASP). ASP is $15,000 for each year earned. ASP is not payable during periods of internship (GME-1) or initial residency training. ASP is

[2] The study did not consider the subsidization value for the Armed Forces Health Professional Scholarship Program, nor did it make compensation comparisons during the period of residency training.

payable during periods of fellowship training if the physician treats patients as part of the training regime. The study assumes ASP is payable during fellowship training. Table A-7 shows the ASP payment schedules used in the study.

Board Certification Pay (BCP). BCP payments begin after successfully completing board certification examinations following residency training, and the amounts vary by year of service. The study assumes that internal medicine and family practice physicians will pass board certification exams by the end of the first year following residency. General surgeons, orthopedic surgeons and radiologists are assumed to pass certification exams by the end of the second year following residency. Payment of BCP for subspecialties follows the same assumptions as for internal medicine. Table A-7 at the end of the Appendix illustrates the payment schedules for each specialty.

Incentive Special Pay (ISP). ISP requires a one-year service contract. Payment varies by specialty and is assumed to begin the fiscal year following residency training. Payment amounts do not vary by year of service. The three subspecialties receive ISP for internal medicine until completion of fellowship training, then begin receiving the ISP for their subspecialty. ISP amounts are also shown in Table A-7.

Multiyear Special Pay (MSP). MSP is payable to Navy physicians signing contracts for two, three or four years of additional service. Payment amounts vary by specialty. To qualify, physicians must have either discharged all ADSC's for training or completed at least eight years creditable service as determined by their Health Profession Pay Entry Date (HPPED). If a physician qualifies to receive MSP after completing at least eight years creditable service as determined by their HPPED but has not completed all ADSC for training, at some time prior to separation or retirement the physician may not receive MSP for the number of years equivalent to the remaining period of obligated service. For example, if a radiologist with a two-year ADSC for training begins receiving MSP after completing at least eight years of creditable service as determined by their HPPED, that physician would not be able to receive MSP during the two-year period immediately preceding separation or retirement. Table A-7 illustrates the MSP payment schedules used in this study.

Combining the various special and incentive pays results in the total annual payments shown in Table A-8 at the end of the Appendix.

Private Sector Physicians:

Base, incentive and total salary data are taken from the Hay Group 1999 Physicians' Total Compensation Survey. Survey data are effective as of mid-1999. We adjusted all data to 2000 by applying a 4.5 percent trend factor.

Participants in the Physician's survey included 91 healthcare organizations in one of three categories: 1) group practices (29 percent), 2) Health Maintenance Organizations (HMOs) (15 percent), and 3) hospital based facilities (56 percent). The data from these organizations represent over 22,300 physician incumbents. The list of participating organizations is provided in Appendix B. The following table illustrates several characteristics of the organizations.

Table A-1: Characteristics of Participating Organizations

Category	Median Gross Revenue (Millions)	Average Number of Employed Physicians	Average Number of Operating/Staffed Beds
Group Practice	$107.1M	251	N/A
HMO	$217.9M	677	N/A
Hospital Systems	$679.4M	187	1,132
Hospitals/Medical Centers	$306.6M	119	388

Compensation data used in the study is for employed staff physicians only. Physicians serving as executives, medical directors, or faculty are excluded.

Total salary is the sum of base salary, incentives and other compensation. Sixty-nine percent of the organizations have incentive or bonus plans, and 47 percent of incumbents received an incentive or bonus payout. Details by type of facility are shown in Table A-2.

Table A-2: Prevalence and Payouts of Incentive Programs

	Group Practice	HMO	Hospital-Based Facility	Total for all Physicians
Percentage Offering an Incentive Program	74%	86%	59%	69%
Percentage of Physicians Receiving an Incentive				
All Physician Specialties	36.5%	67.4%	23.2%	46.5%
Primary Care	47.3%	62.1%	19.9%	47.0%
Other Specialties	30.1%	72.5%	25.7%	46.1%

Other compensation includes:

- Board fees
- Partnership or other equity distribution
- Profit sharing payout
- Property distribution
- On-call differential
- Overtime
- Hire-in bonus or other recruiting incentives
- Distribution from owned ancillary services, and
- Administrative differential.

Individual private sector compensation data are not separately identified by whether the physician is board certified or a graduate of a U.S. medical school. These factors can affect total compensation levels. In some cases, survey respondents indicated the employer applied a salary differential for board certification, but specific amounts are not available. Most Navy physicians are eventually board certified and a majority are graduates of U.S. schools. Consequently, total private sector compensation data are shown for the median (50th percentile[3]) and the 75th percentile[4]. We believe this presents a reasonable range within which it is possible to make valid comparisons.

Annual base salary and total salary (including incentives and other compensation) are provided for selected years of practice in Tables A-3 and A-4 below.

Table A-3: Annual Total Compensation (Median) – Private Sector Physicians[1] by Years of Practice in the Specialty/Subspecialty

Specialty/Subspecialty	3 Years	9 Years	15 Years
Anesthesiology	$207,108	$215,854	$224,600
Cardiology (Invasive)	225,360	229,790	234,220
Dermatology	175,715	186,144	196,574
Emergency Medicine	179,741	189,324	198,906
Family Practice	131,813	135,453	139,094
Gastroenterology	190,810	195,553	200,295
General Surgery	184,742	201,687	218,632
Hematology/Oncology	165,295	181,056	196,188
Internal Medicine	140,254	149,631	159,009
Neurology	158,933	166,806	174,679
Neurosurgery	339,225	329,781	320,337
Obstetrics/Gynecology	197,958	205,615	213,271
Industrial & Occupational Medicine	151,784	152,446	153,108
Ophthalmology	166,871	185,775	204,679
Orthopedic Surgery	237,571	251,621	265,671
Otolaryngology	238,925	233,081	227,237
Pathology	163,339	175,733	188,126
Pediatric Primary Care	130,596	139,164	147,732
Physical Medicine & Rehabilitation	153,279	155,170	157,060
Plastic & Reconstructive Surgery	184,742	233,443	251,786
Psychiatry	140,349	148,685	157,021
Radiology (Diagnostic)	208,495	216,899	225,303
Radiology (Therapeutic)	215,493	226,664	238,697
Urology	294,671	206,081	218,479

1. Source: 1999 Hay Physician's Compensation Survey. Salaries are trended to 1 July 2000.

[3] The median value divides the data set in half. Half of the physicians have total annual compensation above the median and half have total compensation below the median.

[4] Twenty-five percent of physicians have incomes above the 75th percentile, and 75 percent of physicians have income below the 75th percentile.

Table A-4: Annual Total Compensation (75th Percentile) – Private Sector Physicians[1] by Years of Practice in the Specialty/Subspecialty

Specialty/Subspecialty	3 Years	9 Years	15 Years
Anesthesiology	$227,501	$239,458	$251,414
Cardiology (Invasive)	266,655	268,139	269,622
Dermatology	190,374	204,587	218,826
Emergency Medicine	194320	208156	221,991
Family Practice	152,250	159,505	166,759
Gastroenterology	218,866	223,016	227,167
General Surgery	220,834	239,079	255,324
Hematology/Oncology	187,658	197,989	208,321
Internal Medicine	152,538	165,151	177,765
Neurology	177,096	185,119	193,141
Neurosurgery	Insufficient data for reliable estimate of 75th percentile		
Obstetrics/Gynecology	219,973	229,593	239,214
Industrial & Occupational Medicine	164,200	168,143	172,086
Ophthalmology	204,861	222,182	239,503
Orthopedic Surgery	274,135	284,297	294,459
Otolaryngology	245,670	262,042	278,415
Pathology	218,219	221,738	225,257
Pediatric Primary Care	138,835	156,251	173,668
Physical Medicine & Rehabilitation	171,809	181,554	191,309
Plastic & Reconstructive Surgery	222,834	314,229	324,257
Psychiatry	149,567	158,032	166,498
Radiology (Diagnostic)	259,589	262,022	264,455
Radiology (Therapeutic)	263,932	278,835	295,050
Urology	217,403	229,856	243,350

1. Source: 1999 Hay Physician's Compensation Survey. Salaries are trended to 1 July 2000.

Benefits

Benefit categories for active service Navy and private sector physicians are shown in Table A-5. The Benefit Value Comparison (BVC) methodology described in Appendix C is used to calculate a value for each benefit category in Table A-5.

Table A-5: Navy and Private Sector Physician Benefit Categories (Active Service)

Benefit Category	Navy	Private Sector
Group Life Insurance	Servicemen's Group Life Insurance (SGLI) Veterans Group Life Insurance (VGLI) Dependency and Indemnity Compensation (DIC) Death Gratuity Burial Allowance Social Security Death Benefit Unused Leave Payback	Basic Group Life Supplemental Group Life Dependent Group Life Basic Accidental Death Business Travel Insurance
Disability	Short Term Disability Long Term Disability (Temporary and Permanent Disability Retirement)	Short Term Disability Long Term Disability
Health Care	Medical and Dental for Physician and Family (MTF and Tricare)	Health Care Insurance (Medical, Dental, Vision)
Pension Plan	Military Retirement System Survivor Benefit Plan	Defined Benefit Pension Plan
Capital Accumulation Plan	No military analogue currently available	401(k) or 403(b) plans
Holidays/Vacation	Holidays Leave	Holidays Vacations
Other Benefits	Commissary Exchange Morale, Welfare and Recreation (MWR) Personal legal services Child care	Flexible Benefits Programs
Statutory Benefits	Unemployment Compensation Workmen's Compensation Social Security	Unemployment Compensation Workmen's Compensation Social Security

All Navy physicians are assumed to retire under the military retirement system that bases payments on the average of the highest three years of basic pay (High-3 system). Currently serving physicians who are at or near the 7 and 12 year of service points entered military service following enactment of the Military Retirement Reform Act of 1996 and are covered by that system (REDUX). However, the FY2000 National Defense Authorization Act authorized all REDUX participants the opportunity to transfer to the High-3 system at their fifteen year of service points. The study assumes that all physicians will transfer to the High-3 system.

Military benefits for retired Navy physicians working in the private sector include military retirement and the survivor benefit plan. The study does not include the value of several benefits under the presumption that they would not be used.

These include retiree medical care, commissary and exchange, MWR, childcare, and use of installation legal services.

Benefits for retired private sector physicians include pension and capital accumulation plans, survivor benefit plans, and retiree health coverage.

Economic Assumptions

Economic assumptions regarding future inflation, salary growth, and interest are needed to compute the present values of future income and benefit streams. The study uses assumptions adopted by the DoD Office of the Actuary in the annual valuation of the military retirement system. Table A-6 shows the values used. In combination, these assumptions indicate future wage growth will be 0.5 percent above inflation and future interest rates will be 3.0 percent above inflation.

Table A-6: Economic Assumptions

Inflation	3.5%
Wage Growth	4.0%
Interest	6.5%

The interest rate also represents the discount rate or an individual's time preference for money. Very conservative individuals generally display a low discount rate with reflects a relatively even preference between receiving a dollar today or a dollar at some time in the future. Less conservative individuals generally display higher discount rates; they have a stronger preference for receiving a dollar today than a dollar sometime in the future.

The Office of the Actuary's interest rate assumption reflects a relatively conservative long-term view of future interest rates. Individual physicians having a less conservative view of future interest rates and a pronounced preference for income at now versus income in the future may want to use a higher discount rate in comparing Navy and private sector compensation. The effect of using a higher discount rate is to lower the lump sum equivalent value of the future Navy compensation relative to the private sector.

Mortality Assumptions

The source for active duty, retired and survivor mortality rates was the DoD Office of the Actuary Valuation of the Military Retirement System. These rates were applied to both Navy and private sector lives assuming that mortality for a specific individual would not be significantly affected by whether he or she remained affiliated with the Navy.

Table A-7

Anesthesiology

Current End YOS	Age	Grade*	Type of Military Service**	ADSC***	RMC	VSP	ASP	BCP	ISP	MSP****
1	26	O-3	GME-1	4	$46,115.52	$1,200	$0	$0	$0	$0
2	27		GMO	3	$46,115.52	$5,000	$15,000	$0	$0	$0
3	28		GMO	2	$49,360.81	$5,000	$15,000	$0	$0	$0
4	29		IR	3	$52,104.01	$5,000	$0	$0	$0	$0
5	30		IR	3	$55,128.01	$5,000	$0	$0	$0	$0
6	31	O-4	IR	3	$55,128.01	$12,000	$0	$0	$0	$0
7	32		SU	2	$63,312.76	$12,000	$15,000	$0	$29,000	$0
8	33		SU	1	$63,312.76	$11,500	$15,000	$2,500	$29,000	$0
9	34		SU	0	$65,565.16	$11,500	$15,000	$2,500	$29,000	$8,000
10	35		SU		$65,565.16	$11,000	$15,000	$3,500	$29,000	$8,000
11	36		SU		$69,295.30	$11,000	$15,000	$3,500	$29,000	$8,000
12	37	O-5	SU	x	$69,295.30	$10,000	$15,000	$4,000	$29,000	$8,000
13	38		SU		$77,636.70	$10,000	$15,000	$4,000	$29,000	$8,000
14	39		SU		$77,636.70	$9,000	$15,000	$5,000	$29,000	$8,000
15	40		SU		$81,944.86	$9,000	$15,000	$5,000	$29,000	$8,000
16	41		SU		$81,944.86	$9,000	$15,000	$5,000	$29,000	$8,000
17	42		SU	x	$86,077.62	$9,000	$15,000	$5,000	$29,000	$7,000
18	43	O-6	SU		$86,077.62	$8,000	$15,000	$6,000	$29,000	$7,000
19	44		SU		$97,489.60	$8,000	$15,000	$6,000	$29,000	$7,000
20	45		SU	x	$97,489.60	$8,000	$15,000	$6,000	$29,000	$0

* Promotion to O-4 occurs at end of YOS 6; to O-5 at end of YOS 12; to O-6 at end of YOS 18

** Use this key to indicate the type of service for each year

GME-1	Internship
GMO	General Medical Officer
IR	In-Service Residency Training
FT	In-Service Fellowship Training
SU	Staff Utilization Tour - Practicing as specialist
FP	Practicing as fellow

*** Active Duty Service Commitment at the end of the current year of service; x = possible separation point

**** MSP amounts reflect combinations of contract lengths that would result in a contract expiration at end of 20 YOS; Zero amounts occur for N years prior to retirement if physician signed MSP contract while having an N year ADSC for training

Table A-7

Cardiology (Invasive)

Current End YOS	Age	Grade*	Type of Military Service**	ADSC***	RMC	VSP	ASP	BCP	ISP	MSP****
1	26	O-3	GME-1	4	$46,115.52	$1,200	$0	$0	$0	$0
2	27		GMO	3	$46,115.52	$5,000	$15,000	$0	$0	$0
3	28		GMO	2	$49,360.81	$5,000	$15,000	$0	$0	$0
4	29		IR	2	$52,104.01	$5,000	$0	$0	$0	$0
5	30		IR	2	$55,128.01	$5,000	$0	$0	$0	$0
6	31	O-4	SU	1	$55,128.01	$12,000	$15,000	$0	$13,000	$0
7	32		SU	0	$63,312.76	$12,000	$15,000	$2,500	$13,000	$0
8	33		FT	3	$63,312.76	$11,500	$15,000	$2,500	$13,000	$8,000
9	34		FT	3	$65,565.16	$11,500	$15,000	$2,500	$13,000	$8,000
10	35		FT	3	$65,565.16	$11,000	$15,000	$3,500	$13,000	$8,000
11	36		FP	2	$69,295.30	$11,000	$15,000	$3,500	$36,000	$8,000
12	37	O-5	FP	1	$69,295.30	$10,000	$15,000	$4,000	$36,000	$8,000
13	38		FP	0	$77,636.70	$10,000	$15,000	$4,000	$36,000	$8,000
14	39		FP		$77,636.70	$9,000	$15,000	$5,000	$36,000	$8,000
15	40		FP		$81,944.86	$9,000	$15,000	$5,000	$36,000	$8,000
16	41		FP		$81,944.86	$9,000	$15,000	$5,000	$36,000	$6,000
17	42		FP	x	$86,077.62	$9,000	$15,000	$5,000	$36,000	$6,000
18	43	O-6	FP		$86,077.62	$8,000	$15,000	$6,000	$36,000	$0
19	44		FP		$97,489.60	$8,000	$15,000	$6,000	$36,000	$0
20	45		FP	x	$97,489.60	$8,000	$15,000	$6,000	$36,000	$0

* Promotion to O-4 occurs at end of YOS 6; to O-5 at end of YOS 12; to O-6 at end of YOS 18

** Use this key to indicate the type of service for each year

GME-1	Internship
GMO	General Medical Officer
IR	In-Service Residency Training
FT	In-Service Fellowship Training
SU	Staff Utilization Tour - Practicing as specialist
FP	Practicing as fellow

*** Active Duty Service Commitment at the end of the current year of service; x = possible separation point

**** MSP amounts reflect combinations of contract lengths that would result in a contract expiration at end of 20 YOS; Zero amounts occur for N years prior to retirement if physician signed MSP contract while having an N year ADSC for training

Table A-7

Dermatology

Current End YOS	Age	Grade*	Type of Military Service**	ADSC***	RMC	VSP	ASP	BCP	ISP	MSP****
1	26	O-3	GME-1	4	$46,115.52	$1,200	$0	$0	$0	$0
2	27		GMO	3	$46,115.52	$5,000	$15,000	$0	$0	$0
3	28		GMO	2	$49,360.81	$5,000	$15,000	$0	$0	$0
4	29		IR	3	$52,104.01	$5,000	$0	$0	$0	$0
5	30		IR	3	$55,128.01	$5,000	$0	$0	$0	$0
6	31	O-4	IR	3	$55,128.01	$12,000	$0	$0	$0	$0
7	32		SU	2	$63,312.76	$12,000	$15,000	$0	$14,000	$0
8	33		SU	1	$63,312.76	$11,500	$15,000	$2,500	$14,000	$0
9	34		SU	0	$65,565.16	$11,500	$15,000	$2,500	$14,000	$8,000
10	35		SU		$65,565.16	$11,000	$15,000	$3,500	$14,000	$8,000
11	36		SU		$69,295.30	$11,000	$15,000	$3,500	$14,000	$8,000
12	37	O-5	SU	x	$69,295.30	$10,000	$15,000	$4,000	$14,000	$8,000
13	38		SU		$77,636.70	$10,000	$15,000	$4,000	$14,000	$8,000
14	39		SU		$77,636.70	$9,000	$15,000	$5,000	$14,000	$8,000
15	40		SU		$81,944.86	$9,000	$15,000	$5,000	$14,000	$8,000
16	41		SU		$81,944.86	$9,000	$15,000	$5,000	$14,000	$8,000
17	42		SU	x	$86,077.62	$9,000	$15,000	$5,000	$14,000	$7,000
18	43	O-6	SU		$86,077.62	$8,000	$15,000	$6,000	$14,000	$7,000
19	44		SU		$97,489.60	$8,000	$15,000	$6,000	$14,000	$7,000
20	45		SU	x	$97,489.60	$8,000	$15,000	$6,000	$14,000	$0

* Promotion to O-4 occurs at end of YOS 6; to O-5 at end of YOS 12; to O-6 at end of YOS 18

** Use this key to indicate the type of service for each year

GME-1	Internship
GMO	General Medical Officer
IR	In-Service Residency Training
FT	In-Service Fellowship Training
SU	Staff Utilization Tour - Practicing as specialist
FP	Practicing as fellow

*** Active Duty Service Commitment at the end of the current year of service; x = possible separation point

**** MSP amounts reflect combinations of contract lengths that would result in a contract expiration at end of 20 YOS; Zero amounts occur for N years prior to retirement if physician signed MSP contract while having an N year ADSC for training

Table A-7

Emergency Medicine

Current End YOS	Age	Grade*	Type of Military Service**	ADSC***	RMC	VSP	ASP	BCP	ISP	MSP****
1	26	O-3	GME-1	4	$46,115.52	$1,200	$0	$0	$0	$0
2	27		GMO	3	$46,115.52	$5,000	$15,000	$0	$0	$0
3	28		GMO	2	$49,360.81	$5,000	$15,000	$0	$0	$0
4	29		IR	3	$52,104.01	$5,000	$0	$0	$0	$0
5	30		IR	3	$55,128.01	$5,000	$0	$0	$0	$0
6	31	O-4	IR	3	$55,128.01	$12,000	$0	$0	$0	$0
7	32		SU	2	$63,312.76	$12,000	$15,000	$0	$22,000	$0
8	33		SU	1	$63,312.76	$11,500	$15,000	$2,500	$22,000	$0
9	34		SU	0	$65,565.16	$11,500	$15,000	$2,500	$22,000	$8,000
10	35		SU		$65,565.16	$11,000	$15,000	$3,500	$22,000	$8,000
11	36		SU		$69,295.30	$11,000	$15,000	$3,500	$22,000	$8,000
12	37	O-5	SU	x	$69,295.30	$10,000	$15,000	$4,000	$22,000	$8,000
13	38		SU		$77,636.70	$10,000	$15,000	$4,000	$22,000	$8,000
14	39		SU		$77,636.70	$9,000	$15,000	$5,000	$22,000	$8,000
15	40		SU		$81,944.86	$9,000	$15,000	$5,000	$22,000	$8,000
16	41		SU		$81,944.86	$9,000	$15,000	$5,000	$22,000	$8,000
17	42		SU	x	$86,077.62	$9,000	$15,000	$5,000	$22,000	$7,000
18	43	O-6	SU		$86,077.62	$8,000	$15,000	$6,000	$22,000	$7,000
19	44		SU		$97,489.60	$8,000	$15,000	$6,000	$22,000	$7,000
20	45		SU	x	$97,489.60	$8,000	$15,000	$6,000	$22,000	$0

* Promotion to O-4 occurs at end of YOS 6; to O-5 at end of YOS 12; to O-6 at end of YOS 18

** Use this key to indicate the type of service for each year

GME-1	Internship
GMO	General Medical Officer
IR	In-Service Residency Training
FT	In-Service Fellowship Training
SU	Staff Utilization Tour - Practicing as specialist
FP	Practicing as fellow

*** Active Duty Service Commitment at the end of the current year of service; x = possible separation point

**** MSP amounts reflect combinations of contract lengths that would result in a contract expiration at end of 20 YOS; Zero amounts occur for N years prior to retirement if physician signed MSP contract while having an N year ADSC for training

Table A-7

Family Practice

Current End YOS	Age	Grade*	Type of Military Service**	ADSC***	RMC	VSP	ASP	BCP	ISP	MSP****
1	26	O-3	GME-1	4	$46,115.52	$1,200	$0	$0	$0	$0
2	27		GMO	3	$46,115.52	$5,000	$15,000	$0	$0	$0
3	28		GMO	2	$49,360.81	$5,000	$15,000	$0	$0	$0
4	29		IR	2	$52,104.01	$5,000	$0	$0	$0	$0
5	30		IR	2	$55,128.01	$5,000	$0	$0	$0	$0
6	31	O-4	SU	1	$55,128.01	$12,000	$15,000	$0	$13,000	$0
7	32		SU	0(x)	$63,312.76	$12,000	$15,000	$2,500	$13,000	$0
8	33		SU		$63,312.76	$11,500	$15,000	$2,500	$13,000	$14,000
9	34		SU		$65,565.16	$11,500	$15,000	$2,500	$13,000	$14,000
10	35		SU		$65,565.16	$11,000	$15,000	$3,500	$13,000	$14,000
11	36		SU		$69,295.30	$11,000	$15,000	$3,500	$13,000	$14,000
12	37	O-5	SU	x	$69,295.30	$10,000	$15,000	$4,000	$13,000	$14,000
13	38		SU		$77,636.70	$10,000	$15,000	$4,000	$13,000	$14,000
14	39		SU		$77,636.70	$9,000	$15,000	$5,000	$13,000	$14,000
15	40		SU		$81,944.86	$9,000	$15,000	$5,000	$13,000	$14,000
16	41		SU		$81,944.86	$9,000	$15,000	$5,000	$13,000	$10,000
17	42		SU	x	$86,077.62	$9,000	$15,000	$5,000	$13,000	$10,000
18	43	O-6	SU		$86,077.62	$8,000	$15,000	$6,000	$13,000	$10,000
19	44		SU		$97,489.60	$8,000	$15,000	$6,000	$13,000	$9,000
20	45		SU	x	$97,489.60	$8,000	$15,000	$6,000	$13,000	$9,000

* Promotion to O-4 occurs at end of YOS 6; to O-5 at end of YOS 12; to O-6 at end of YOS 18

** Use this key to indicate the type of service for each year

GME-1	Internship
GMO	General Medical Officer
IR	In-Service Residency Training
FT	In-Service Fellowship Training
SU	Staff Utilization Tour - Practicing as specialist
FP	Practicing as fellow

*** Active Duty Service Commitment at the end of the current year of service; x = possible separation point

**** MSP amounts reflect combinations of contract lengths that would result in a contract expiration at end of 20 YOS; Zero amounts occur for N years prior to retirement if physician signed MSP contract while having an N year ADSC for training

Table A-7

Gastroenterology

Current End YOS	Age	Grade*	Type of Military Service**	ADSC***	RMC	VSP	ASP	BCP	ISP	MSP****
1	26	O-3	GME-1	4	$46,115.52	$1,200	$0	$0	$0	$0
2	27		GMO	3	$46,115.52	$5,000	$15,000	$0	$0	$0
3	28		GMO	2	$49,360.81	$5,000	$15,000	$0	$0	$0
4	29		IR	2	$52,104.01	$5,000	$0	$0	$0	$0
5	30		IR	2	$55,128.01	$5,000	$0	$0	$0	$0
6	31	O-4	SU	1	$55,128.01	$12,000	$15,000	$0	$13,000	$0
7	32		SU	0	$63,312.76	$12,000	$15,000	$2,500	$13,000	$0
8	33		FT	3	$63,312.76	$11,500	$15,000	$2,500	$13,000	$8,000
9	34		FT	3	$65,565.16	$11,500	$15,000	$2,500	$13,000	$8,000
10	35		FT	3	$65,565.16	$11,000	$15,000	$3,500	$13,000	$8,000
11	36		FP	2	$69,295.30	$11,000	$15,000	$3,500	$23,000	$8,000
12	37	O-5	FP	1	$69,295.30	$10,000	$15,000	$4,000	$23,000	$8,000
13	38		FP	0	$77,636.70	$10,000	$15,000	$4,000	$23,000	$8,000
14	39		FP		$77,636.70	$9,000	$15,000	$5,000	$23,000	$8,000
15	40		FP		$81,944.86	$9,000	$15,000	$5,000	$23,000	$8,000
16	41		FP		$81,944.86	$9,000	$15,000	$5,000	$23,000	$6,000
17	42		FP	x	$86,077.62	$9,000	$15,000	$5,000	$23,000	$6,000
18	43	O-6	FP		$86,077.62	$8,000	$15,000	$6,000	$23,000	$0
19	44		FP		$97,489.60	$8,000	$15,000	$6,000	$23,000	$0
20	45		FP	x	$97,489.60	$8,000	$15,000	$6,000	$23,000	$0

* Promotion to O-4 occurs at end of YOS 6; to O-5 at end of YOS 12; to O-6 at end of YOS 18

** Use this key to indicate the type of service for each year

GME-1	Internship
GMO	General Medical Officer
IR	In-Service Residency Training
FT	In-Service Fellowship Training
SU	Staff Utilization Tour - Practicing as specialist
FP	Practicing as fellow

*** Active Duty Service Commitment at the end of the current year of service; x = possible separation point

**** MSP amounts reflect combinations of contract lengths that would result in a contract expiration at end of 20 YOS; Zero amounts occur for N years prior to retirement if physician signed MSP contract while having an N year ADSC for training

Table A-7

General Surgery

Current End YOS	Age	Grade*	Type of Military Service**	ADSC***	RMC	VSP	ASP	BCP	ISP	MSP****
1	26	O-3	GME-1	4	$46,115.52	$1,200	$0	$0	$0	$0
2	27		GMO	3	$46,115.52	$5,000	$15,000	$0	$0	$0
3	28		GMO	2	$49,360.81	$5,000	$15,000	$0	$0	$0
4	29		IR	4	$52,104.01	$5,000	$0	$0	$0	$0
5	30		IR	4	$55,128.01	$5,000	$0	$0	$0	$0
6	31	O-4	IR	4	$55,128.01	$12,000	$0	$0	$0	$0
7	32		IR	4	$63,312.76	$12,000	$0	$0	$0	$0
8	33		SU	3	$63,312.76	$11,500	$15,000	$0	$26,000	$0
9	34		SU	2	$65,565.16	$11,500	$15,000	$0	$26,000	$14,000
10	35		SU	1	$65,565.16	$11,000	$15,000	$3,500	$26,000	$14,000
11	36		SU	0	$69,295.30	$11,000	$15,000	$3,500	$26,000	$14,000
12	37	O-5	SU	x	$69,295.30	$10,000	$15,000	$4,000	$26,000	$14,000
13	38		SU		$77,636.70	$10,000	$15,000	$4,000	$26,000	$10,000
14	39		SU		$77,636.70	$9,000	$15,000	$5,000	$26,000	$10,000
15	40		SU		$81,944.86	$9,000	$15,000	$5,000	$26,000	$10,000
16	41		SU		$81,944.86	$9,000	$15,000	$5,000	$26,000	$9,000
17	42		SU	x	$86,077.62	$9,000	$15,000	$5,000	$26,000	$9,000
18	43	O-6	SU		$86,077.62	$8,000	$15,000	$6,000	$26,000	$0
19	44		SU		$97,489.60	$8,000	$15,000	$6,000	$26,000	$0
20	45		SU	x	$97,489.60	$8,000	$15,000	$6,000	$26,000	$0

* Promotion to O-4 occurs at end of YOS 6; to O-5 at end of YOS 12; to O-6 at end of YOS 18

** Use this key to indicate the type of service for each year

GME-1	Internship
GMO	General Medical Officer
IR	In-Service Residency Training
FT	In-Service Fellowship Training
SU	Staff Utilization Tour - Practicing as specialist
FP	Practicing as fellow

*** Active Duty Service Commitment at the end of the current year of service; x = possible separation point

**** MSP amounts reflect combinations of contract lengths that would result in a contract expiration at end of 20 YOS; Zero amounts occur for N years prior to retirement if physician signed MSP contract while having an N year ADSC for training

Table A-7

Hematology/Oncology

Current End YOS	Age	Grade*	Type of Military Service**	ADSC***	RMC	VSP	ASP	BCP	ISP	MSP****
1	26	O-3	GME-1	4	$46,115.52	$1,200	$0	$0	$0	$0
2	27		GMO	3	$46,115.52	$5,000	$15,000	$0	$0	$0
3	28		GMO	2	$49,360.81	$5,000	$15,000	$0	$0	$0
4	29		IR	2	$52,104.01	$5,000	$0	$0	$0	$0
5	30		IR	2	$55,128.01	$5,000	$0	$0	$0	$0
6	31	O-4	SU	1	$55,128.01	$12,000	$15,000	$0	$13,000	$0
7	32		SU	0	$63,312.76	$12,000	$15,000	$2,500	$13,000	$0
8	33		FT	3	$63,312.76	$11,500	$15,000	$2,500	$13,000	$8,000
9	34		FT	3	$65,565.16	$11,500	$15,000	$2,500	$13,000	$8,000
10	35		FT	3	$65,565.16	$11,000	$15,000	$3,500	$13,000	$8,000
11	36		FP	2	$69,295.30	$11,000	$15,000	$3,500	$14,000	$8,000
12	37	O-5	FP	1	$69,295.30	$10,000	$15,000	$4,000	$14,000	$8,000
13	38		FP	0	$77,636.70	$10,000	$15,000	$4,000	$14,000	$8,000
14	39		FP		$77,636.70	$9,000	$15,000	$5,000	$14,000	$8,000
15	40		FP		$81,944.86	$9,000	$15,000	$5,000	$14,000	$8,000
16	41		FP		$81,944.86	$9,000	$15,000	$5,000	$14,000	$6,000
17	42		FP	x	$86,077.62	$9,000	$15,000	$5,000	$14,000	$6,000
18	43	O-6	FP		$86,077.62	$8,000	$15,000	$6,000	$14,000	$0
19	44		FP		$97,489.60	$8,000	$15,000	$6,000	$14,000	$0
20	45		FP	x	$97,489.60	$8,000	$15,000	$6,000	$14,000	$0

* Promotion to O-4 occurs at end of YOS 6; to O-5 at end of YOS 12; to O-6 at end of YOS 18

** Use this key to indicate the type of service for each year

GME-1	Internship
GMO	General Medical Officer
IR	In-Service Residency Training
FT	In-Service Fellowship Training
SU	Staff Utilization Tour - Practicing as specialist
FP	Practicing as fellow

*** Active Duty Service Commitment at the end of the current year of service; x = possible separation point

**** MSP amounts reflect combinations of contract lengths that would result in a contract expiration at end of 20 YOS; Zero amounts occur for N years prior to retirement if physician signed MSP contract while having an N year ADSC for training

Table A-7

Internal Medicine

Current End YOS	Age	Grade*	Type of Military Service**	ADSC***	RMC	VSP	ASP	BCP	ISP	MSP****
1	26	O-3	GME-1	4	$46,115.52	$1,200	$0	$0	$0	$0
2	27		GMO	3	$46,115.52	$5,000	$15,000	$0	$0	$0
3	28		GMO	2	$49,360.81	$5,000	$15,000	$0	$0	$0
4	29		IR	2	$52,104.01	$5,000	$0	$0	$0	$0
5	30		IR	2	$55,128.01	$5,000	$0	$0	$0	$0
6	31	O-4	SU	1	$55,128.01	$12,000	$15,000	$0	$13,000	$0
7	32		SU	0(x)	$63,312.76	$12,000	$15,000	$2,500	$13,000	$0
8	33		SU		$63,312.76	$11,500	$15,000	$2,500	$13,000	$8,000
9	34		SU		$65,565.16	$11,500	$15,000	$2,500	$13,000	$8,000
10	35		SU		$65,565.16	$11,000	$15,000	$3,500	$13,000	$8,000
11	36		SU		$69,295.30	$11,000	$15,000	$3,500	$13,000	$8,000
12	37	O-5	SU	x	$69,295.30	$10,000	$15,000	$4,000	$13,000	$8,000
13	38		SU		$77,636.70	$10,000	$15,000	$4,000	$13,000	$8,000
14	39		SU		$77,636.70	$9,000	$15,000	$5,000	$13,000	$8,000
15	40		SU		$81,944.86	$9,000	$15,000	$5,000	$13,000	$8,000
16	41		SU		$81,944.86	$9,000	$15,000	$5,000	$13,000	$7,000
17	42		SU	x	$86,077.62	$9,000	$15,000	$5,000	$13,000	$7,000
18	43	O-6	SU		$86,077.62	$8,000	$15,000	$6,000	$13,000	$7,000
19	44		SU		$97,489.60	$8,000	$15,000	$6,000	$13,000	$6,000
20	45		SU	x	$97,489.60	$8,000	$15,000	$6,000	$13,000	$6,000

* Promotion to O-4 occurs at end of YOS 6; to O-5 at end of YOS 12; to O-6 at end of YOS 18

** Use this key to indicate the type of service for each year

GME-1	Internship
GMO	General Medical Officer
IR	In-Service Residency Training
FT	In-Service Fellowship Training
SU	Staff Utilization Tour - Practicing as specialist
FP	Practicing as fellow

*** Active Duty Service Commitment at the end of the current year of service; x = possible separation point

**** MSP amounts reflect combinations of contract lengths that would result in a contract expiration at end of 20 YOS; Zero amounts occur for N years prior to retirement if physician signed MSP contract while having an N year ADSC for training

Table A-7

Neurology

Current End YOS	Age	Grade*	Type of Military Service**	ADSC***	RMC	VSP	ASP	BCP	ISP	MSP****
1	26	O-3	GME-1	4	$46,115.52	$1,200	$0	$0	$0	$0
2	27		GMO	3	$46,115.52	$5,000	$15,000	$0	$0	$0
3	28		GMO	2	$49,360.81	$5,000	$15,000	$0	$0	$0
4	29		IR	3	$52,104.01	$5,000	$0	$0	$0	$0
5	30		IR	3	$55,128.01	$5,000	$0	$0	$0	$0
6	31	O-4	IR	3	$55,128.01	$12,000	$0	$0	$0	$0
7	32		SU	2	$63,312.76	$12,000	$15,000	$0	$13,000	$0
8	33		SU	1	$63,312.76	$11,500	$15,000	$2,500	$13,000	$0
9	34		SU	0	$65,565.16	$11,500	$15,000	$2,500	$13,000	$8,000
10	35		SU		$65,565.16	$11,000	$15,000	$3,500	$13,000	$8,000
11	36		SU		$69,295.30	$11,000	$15,000	$3,500	$13,000	$8,000
12	37	O-5	SU	x	$69,295.30	$10,000	$15,000	$4,000	$13,000	$8,000
13	38		SU		$77,636.70	$10,000	$15,000	$4,000	$13,000	$8,000
14	39		SU		$77,636.70	$9,000	$15,000	$5,000	$13,000	$8,000
15	40		SU		$81,944.86	$9,000	$15,000	$5,000	$13,000	$8,000
16	41		SU		$81,944.86	$9,000	$15,000	$5,000	$13,000	$8,000
17	42		SU	x	$86,077.62	$9,000	$15,000	$5,000	$13,000	$7,000
18	43	O-6	SU		$86,077.62	$8,000	$15,000	$6,000	$13,000	$7,000
19	44		SU		$97,489.60	$8,000	$15,000	$6,000	$13,000	$7,000
20	45		SU	x	$97,489.60	$8,000	$15,000	$6,000	$13,000	$0

* Promotion to O-4 occurs at end of YOS 6; to O-5 at end of YOS 12; to O-6 at end of YOS 18

** Use this key to indicate the type of service for each year

GME-1	Internship
GMO	General Medical Officer
IR	In-Service Residency Training
FT	In-Service Fellowship Training
SU	Staff Utilization Tour - Practicing as specialist
FP	Practicing as fellow

*** Active Duty Service Commitment at the end of the current year of service; x = possible separation point

**** MSP amounts reflect combinations of contract lengths that would result in a contract expiration at end of 20 YOS; Zero amounts occur for N years prior to retirement if physician signed MSP contract while having an N year ADSC for training

Table A-7

Neurosurgery

Current End YOS	Age	Grade*	Type of Military Service**	ADSC***	RMC	VSP	ASP	BCP	ISP	MSP****
1	26	O-3	GME-1	4	$46,115.52	$1,200	$0	$0	$0	$0
2	27		GMO	3	$46,115.52	$5,000	$15,000	$0	$0	$0
3	28		GMO	2	$49,360.81	$5,000	$15,000	$0	$0	$0
4	29		IR	6	$52,104.01	$5,000	$0	$0	$0	$0
5	30		IR	6	$55,128.01	$5,000	$0	$0	$0	$0
6	31	O-4	IR	6	$55,128.01	$12,000	$0	$0	$0	$0
7	32		IR	6	$63,312.76	$12,000	$0	$0	$0	$0
8	33		IR	6	$63,312.76	$11,500	$0	$0	$0	$0
9	34		IR	6	$65,565.16	$11,500	$0	$0	$0	$0
10	35		SU	5	$65,565.16	$11,000	$15,000	$0	$36,000	$9,000
11	36		SU	4	$69,295.30	$11,000	$15,000	$0	$36,000	$9,000
12	37	O-5	SU	3	$69,295.30	$10,000	$15,000	$4,000	$36,000	$9,000
13	38		SU	2	$77,636.70	$10,000	$15,000	$4,000	$36,000	$8,000
14	39		SU	1	$77,636.70	$9,000	$15,000	$5,000	$36,000	$8,000
15	40		SU	0	$81,944.86	$9,000	$15,000	$5,000	$36,000	$0
16	41		SU		$81,944.86	$9,000	$15,000	$5,000	$36,000	$0
17	42		SU	x	$86,077.62	$9,000	$15,000	$5,000	$36,000	$0
18	43	O-6	SU		$86,077.62	$8,000	$15,000	$6,000	$36,000	$0
19	44		SU		$97,489.60	$8,000	$15,000	$6,000	$36,000	$0
20	45		SU	x	$97,489.60	$8,000	$15,000	$6,000	$36,000	$0

* Promotion to O-4 occurs at end of YOS 6; to O-5 at end of YOS 12; to O-6 at end of YOS 18

** Use this key to indicate the type of service for each year

GME-1	Internship
GMO	General Medical Officer
IR	In-Service Residency Training
FT	In-Service Fellowship Training
SU	Staff Utilization Tour - Practicing as specialist
FP	Practicing as fellow

*** Active Duty Service Commitment at the end of the current year of service; x = possible separation point

**** MSP amounts reflect combinations of contract lengths that would result in a contract expiration at end of 20 YOS; Zero amounts occur for N years prior to retirement if physician signed MSP contract while having an N year ADSC for training

Table A-7

Obstetrics/Gynecology

Current End YOS	Age	Grade*	Type of Military Service**	ADSC***	RMC	VSP	ASP	BCP	ISP	MSP****
1	26	O-3	GME-1	4	$46,115.52	$1,200	$0	$0	$0	$0
2	27		GMO	3	$46,115.52	$5,000	$15,000	$0	$0	$0
3	28		GMO	2	$49,360.81	$5,000	$15,000	$0	$0	$0
4	29		IR	3	$52,104.01	$5,000	$0	$0	$0	$0
5	30		IR	3	$55,128.01	$5,000	$0	$0	$0	$0
6	31	O-4	IR	3	$55,128.01	$12,000	$0	$0	$0	$0
7	32		SU	2	$63,312.76	$12,000	$15,000	$0	$31,000	$0
8	33		SU	1	$63,312.76	$11,500	$15,000	$0	$31,000	$0
9	34		SU	0	$65,565.16	$11,500	$15,000	$2,500	$31,000	$8,000
10	35		SU		$65,565.16	$11,000	$15,000	$3,500	$31,000	$8,000
11	36		SU		$69,295.30	$11,000	$15,000	$3,500	$31,000	$8,000
12	37	O-5	SU	x	$69,295.30	$10,000	$15,000	$4,000	$31,000	$8,000
13	38		SU		$77,636.70	$10,000	$15,000	$4,000	$31,000	$8,000
14	39		SU		$77,636.70	$9,000	$15,000	$5,000	$31,000	$8,000
15	40		SU		$81,944.86	$9,000	$15,000	$5,000	$31,000	$8,000
16	41		SU		$81,944.86	$9,000	$15,000	$5,000	$31,000	$8,000
17	42		SU	x	$86,077.62	$9,000	$15,000	$5,000	$31,000	$7,000
18	43	O-6	SU		$86,077.62	$8,000	$15,000	$6,000	$31,000	$7,000
19	44		SU		$97,489.60	$8,000	$15,000	$6,000	$31,000	$7,000
20	45		SU	x	$97,489.60	$8,000	$15,000	$6,000	$31,000	$0

* Promotion to O-4 occurs at end of YOS 6; to O-5 at end of YOS 12; to O-6 at end of YOS 18

** Use this key to indicate the type of service for each year

GME-1	Internship
GMO	General Medical Officer
IR	In-Service Residency Training
FT	In-Service Fellowship Training
SU	Staff Utilization Tour - Practicing as specialist
FP	Practicing as fellow

*** Active Duty Service Commitment at the end of the current year of service; x = possible separation point

**** MSP amounts reflect combinations of contract lengths that would result in a contract expiration at end of 20 YOS; Zero amounts occur for N years prior to retirement if physician signed MSP contract while having an N year ADSC for training

Table A-7

Industrial/Occupational Medicine

Current End YOS	Age	Grade*	Type of Military Service**	ADSC***	RMC	VSP	ASP	BCP	ISP	MSP****
1	26	O-3	GME-1	4	$46,115.52	$1,200	$0	$0	$0	$0
2	27		GMO	3	$46,115.52	$5,000	$15,000	$0	$0	$0
3	28		GMO	2	$49,360.81	$5,000	$15,000	$0	$0	$0
4	29		IR	2	$52,104.01	$5,000	$0	$0	$0	$0
5	30		IR	2	$55,128.01	$5,000	$0	$0	$0	$0
6	31	O-4	SU	1	$55,128.01	$12,000	$15,000	$0	$11,000	$0
7	32		SU	0(x)	$63,312.76	$12,000	$15,000	$2,500	$11,000	$0
8	33		SU		$63,312.76	$11,500	$15,000	$2,500	$11,000	$10,000
9	34		SU		$65,565.16	$11,500	$15,000	$2,500	$11,000	$10,000
10	35		SU		$65,565.16	$11,000	$15,000	$3,500	$11,000	$10,000
11	36		SU		$69,295.30	$11,000	$15,000	$3,500	$11,000	$10,000
12	37	O-5	SU	x	$69,295.30	$10,000	$15,000	$4,000	$11,000	$10,000
13	38		SU		$77,636.70	$10,000	$15,000	$4,000	$11,000	$10,000
14	39		SU		$77,636.70	$9,000	$15,000	$5,000	$11,000	$10,000
15	40		SU		$81,944.86	$9,000	$15,000	$5,000	$11,000	$10,000
16	41		SU		$81,944.86	$9,000	$15,000	$5,000	$11,000	$8,000
17	42		SU	x	$86,077.62	$9,000	$15,000	$5,000	$11,000	$8,000
18	43	O-6	SU		$86,077.62	$8,000	$15,000	$6,000	$11,000	$0
19	44		SU		$97,489.60	$8,000	$15,000	$6,000	$11,000	$0
20	45		SU	x	$97,489.60	$8,000	$15,000	$6,000	$11,000	$0

* Promotion to O-4 occurs at end of YOS 6; to O-5 at end of YOS 12; to O-6 at end of YOS 18

** Use this key to indicate the type of service for each year

GME-1	Internship
GMO	General Medical Officer
IR	In-Service Residency Training
FT	In-Service Fellowship Training
SU	Staff Utilization Tour - Practicing as specialist
FP	Practicing as fellow

*** Active Duty Service Commitment at the end of the current year of service; x = possible separation point

**** MSP amounts reflect combinations of contract lengths that would result in a contract expiration at end of 20 YOS; Zero amounts occur for N years prior to retirement if physician signed MSP contract while having an N year ADSC for training

Table A-7

Ophthalmology

Current End YOS	Age	Grade*	Type of Military Service**	ADSC***	RMC	VSP	ASP	BCP	ISP	MSP****
1	26	O-3	GME-1	4	$46,115.52	$1,200	$0	$0	$0	$0
2	27		GMO	3	$46,115.52	$5,000	$15,000	$0	$0	$0
3	28		GMO	2	$49,360.81	$5,000	$15,000	$0	$0	$0
4	29		IR	3	$52,104.01	$5,000	$0	$0	$0	$0
5	30		IR	3	$55,128.01	$5,000	$0	$0	$0	$0
6	31	O-4	IR	3	$55,128.01	$12,000	$0	$0	$0	$0
7	32		SU	2	$63,312.76	$12,000	$15,000	$0	$28,000	$0
8	33		SU	1	$63,312.76	$11,500	$15,000	$0	$28,000	$0
9	34		SU	0	$65,565.16	$11,500	$15,000	$2,500	$28,000	$0
10	35		SU		$65,565.16	$11,000	$15,000	$3,500	$28,000	$0
11	36		SU		$69,295.30	$11,000	$15,000	$3,500	$28,000	$0
12	37	O-5	SU	x	$69,295.30	$10,000	$15,000	$4,000	$28,000	$0
13	38		SU		$77,636.70	$10,000	$15,000	$4,000	$28,000	$0
14	39		SU		$77,636.70	$9,000	$15,000	$5,000	$28,000	$0
15	40		SU		$81,944.86	$9,000	$15,000	$5,000	$28,000	$0
16	41		SU		$81,944.86	$9,000	$15,000	$5,000	$28,000	$0
17	42		SU	x	$86,077.62	$9,000	$15,000	$5,000	$28,000	$0
18	43	O-6	SU		$86,077.62	$8,000	$15,000	$6,000	$28,000	$0
19	44		SU		$97,489.60	$8,000	$15,000	$6,000	$28,000	$0
20	45		SU	x	$97,489.60	$8,000	$15,000	$6,000	$28,000	$0

* Promotion to O-4 occurs at end of YOS 6; to O-5 at end of YOS 12; to O-6 at end of YOS 18

** Use this key to indicate the type of service for each year

GME-1	Internship
GMO	General Medical Officer
IR	In-Service Residency Training
FT	In-Service Fellowship Training
SU	Staff Utilization Tour - Practicing as specialist
FP	Practicing as fellow

*** Active Duty Service Commitment at the end of the current year of service; x = possible separation point

**** MSP amounts reflect combinations of contract lengths that would result in a contract expiration at end of 20 YOS; Zero amounts occur for N years prior to retirement if physician signed MSP contract while having an N year ADSC for training

Table A-7

Orthopedic Surgery

Current End YOS	Age	Grade*	Type of Military Service**	ADSC***	RMC	VSP	ASP	BCP	ISP	MSP****
1	26	O-3	GME-1	4	$46,115.52	$1,200	$0	$0	$0	$0
2	27		GMO	3	$46,115.52	$5,000	$15,000	$0	$0	$0
3	28		GMO	2	$49,360.81	$5,000	$15,000	$0	$0	$0
4	29		IR	4	$52,104.01	$5,000	$0	$0	$0	$0
5	30		IR	4	$55,128.01	$5,000	$0	$0	$0	$0
6	31	O-4	IR	4	$55,128.01	$12,000	$0	$0	$0	$0
7	32		IR	4	$63,312.76	$12,000	$0	$0	$0	$0
8	33		SU	3	$63,312.76	$11,500	$15,000	$0	$36,000	$0
9	34		SU	2	$65,565.16	$11,500	$15,000	$0	$36,000	$14,000
10	35		SU	1	$65,565.16	$11,000	$15,000	$3,500	$36,000	$14,000
11	36		SU	0	$69,295.30	$11,000	$15,000	$3,500	$36,000	$14,000
12	37	O-5	SU	x	$69,295.30	$10,000	$15,000	$4,000	$36,000	$14,000
13	38		SU		$77,636.70	$10,000	$15,000	$4,000	$36,000	$10,000
14	39		SU		$77,636.70	$9,000	$15,000	$5,000	$36,000	$10,000
15	40		SU		$81,944.86	$9,000	$15,000	$5,000	$36,000	$10,000
16	41		SU		$81,944.86	$9,000	$15,000	$5,000	$36,000	$9,000
17	42		SU	x	$86,077.62	$9,000	$15,000	$5,000	$36,000	$9,000
18	43	O-6	SU		$86,077.62	$8,000	$15,000	$6,000	$36,000	$0
19	44		SU		$97,489.60	$8,000	$15,000	$6,000	$36,000	$0
20	45		SU	x	$97,489.60	$8,000	$15,000	$6,000	$36,000	$0

* Promotion to O-4 occurs at end of YOS 6; to O-5 at end of YOS 12; to O-6 at end of YOS 18

** Use this key to indicate the type of service for each year

GME-1	Internship
GMO	General Medical Officer
IR	In-Service Residency Training
FT	In-Service Fellowship Training
SU	Staff Utilization Tour - Practicing as specialist
FP	Practicing as fellow

*** Active Duty Service Commitment at the end of the current year of service; x = possible separation point

**** MSP amounts reflect combinations of contract lengths that would result in a contract expiration at end of 20 YOS; Zero amounts occur for N years prior to retirement if physician signed MSP contract while having an N year ADSC for training

Table A-7

Otolaryngology

Current End YOS	Age	Grade*	Type of Military Service**	ADSC***	RMC	VSP	ASP	BCP	ISP	MSP****
1	26	O-3	GME-1	4	$46,115.52	$1,200	$0	$0	$0	$0
2	27		GMO	3	$46,115.52	$5,000	$15,000	$0	$0	$0
3	28		GMO	2	$49,360.81	$5,000	$15,000	$0	$0	$0
4	29		IR	5	$52,104.01	$5,000	$0	$0	$0	$0
5	30		IR	5	$55,128.01	$5,000	$0	$0	$0	$0
6	31	O-4	IR	5	$55,128.01	$12,000	$0	$0	$0	$0
7	32		IR	5	$63,312.76	$12,000	$0	$0	$0	$0
8	33		IR	5	$63,312.76	$11,500	$0	$0	$0	$0
9	34		SU	4	$65,565.16	$11,500	$15,000	$0	$30,000	$8,000
10	35		SU	3	$65,565.16	$11,000	$15,000	$0	$30,000	$8,000
11	36		SU	2	$69,295.30	$11,000	$15,000	$3,500	$30,000	$8,000
12	37	O-5	SU	1	$69,295.30	$10,000	$15,000	$4,000	$30,000	$8,000
13	38		SU	0	$77,636.70	$10,000	$15,000	$4,000	$30,000	$7,000
14	39		SU		$77,636.70	$9,000	$15,000	$5,000	$30,000	$7,000
15	40		SU		$81,944.86	$9,000	$15,000	$5,000	$30,000	$7,000
16	41		SU		$81,944.86	$9,000	$15,000	$5,000	$30,000	$0
17	42		SU	x	$86,077.62	$9,000	$15,000	$5,000	$30,000	$0
18	43	O-6	SU		$86,077.62	$8,000	$15,000	$6,000	$30,000	$0
19	44		SU		$97,489.60	$8,000	$15,000	$6,000	$30,000	$0
20	45		SU	x	$97,489.60	$8,000	$15,000	$6,000	$30,000	$0

* Promotion to O-4 occurs at end of YOS 6; to O-5 at end of YOS 12; to O-6 at end of YOS 18

** Use this key to indicate the type of service for each year

GME-1	Internship
GMO	General Medical Officer
IR	In-Service Residency Training
FT	In-Service Fellowship Training
SU	Staff Utilization Tour - Practicing as specialist
FP	Practicing as fellow

*** Active Duty Service Commitment at the end of the current year of service; x = possible separation point

**** MSP amounts reflect combinations of contract lengths that would result in a contract expiration at end of 20 YOS; Zero amounts occur for N years prior to retirement if physician signed MSP contract while having an N year ADSC for training

Table A-7

Pathology

Current End YOS	Age	Grade*	Type of Military Service**	ADSC***	RMC	VSP	ASP	BCP	ISP	MSP****
1	26	O-3	GME-1	4	$46,115.52	$1,200	$0	$0	$0	$0
2	27		GMO	3	$46,115.52	$5,000	$15,000	$0	$0	$0
3	28		GMO	2	$49,360.81	$5,000	$15,000	$0	$0	$0
4	29		IR	4	$52,104.01	$5,000	$0	$0	$0	$0
5	30		IR	4	$55,128.01	$5,000	$0	$0	$0	$0
6	31	O-4	IR	4	$55,128.01	$12,000	$0	$0	$0	$0
7	32		IR	4	$63,312.76	$12,000	$0	$0	$0	$0
8	33		SU	3	$63,312.76	$11,500	$15,000	$0	$16,000	$0
9	34		SU	2	$65,565.16	$11,500	$15,000	$2,500	$16,000	$8,000
10	35		SU	1	$65,565.16	$11,000	$15,000	$3,500	$16,000	$8,000
11	36		SU	0	$69,295.30	$11,000	$15,000	$3,500	$16,000	$8,000
12	37	O-5	SU	x	$69,295.30	$10,000	$15,000	$4,000	$16,000	$8,000
13	38		SU		$77,636.70	$10,000	$15,000	$4,000	$16,000	$7,000
14	39		SU		$77,636.70	$9,000	$15,000	$5,000	$16,000	$7,000
15	40		SU		$81,944.86	$9,000	$15,000	$5,000	$16,000	$7,000
16	41		SU		$81,944.86	$9,000	$15,000	$5,000	$16,000	$6,000
17	42		SU	x	$86,077.62	$9,000	$15,000	$5,000	$16,000	$6,000
18	43	O-6	SU		$86,077.62	$8,000	$15,000	$6,000	$16,000	$0
19	44		SU		$97,489.60	$8,000	$15,000	$6,000	$16,000	$0
20	45		SU	x	$97,489.60	$8,000	$15,000	$6,000	$16,000	$0

* Promotion to O-4 occurs at end of YOS 6; to O-5 at end of YOS 12; to O-6 at end of YOS 18

** Use this key to indicate the type of service for each year

GME-1	Internship
GMO	General Medical Officer
IR	In-Service Residency Training
FT	In-Service Fellowship Training
SU	Staff Utilization Tour - Practicing as specialist
FP	Practicing as fellow

*** Active Duty Service Commitment at the end of the current year of service; x = possible separation point

**** MSP amounts reflect combinations of contract lengths that would result in a contract expiration at end of 20 YOS; Zero amounts occur for N years prior to retirement if physician signed MSP contract while having an N year ADSC for training

Table A-7

Pediatric Primary Care

Current End YOS	Age	Grade*	Type of Military Service**	ADSC***	RMC	VSP	ASP	BCP	ISP	MSP****
1	26	O-3	GME-1	4	$46,115.52	$1,200	$0	$0	$0	$0
2	27		GMO	3	$46,115.52	$5,000	$15,000	$0	$0	$0
3	28		GMO	2	$49,360.81	$5,000	$15,000	$0	$0	$0
4	29		IR	2	$52,104.01	$5,000	$0	$0	$0	$0
5	30		IR	2	$55,128.01	$5,000	$0	$0	$0	$0
6	31	O-4	SU	1	$55,128.01	$12,000	$15,000	$0	$11,000	$0
7	32		SU	0(x)	$63,312.76	$12,000	$15,000	$2,500	$11,000	$0
8	33		SU		$63,312.76	$11,500	$15,000	$2,500	$11,000	$8,000
9	34		SU		$65,565.16	$11,500	$15,000	$2,500	$11,000	$8,000
10	35		SU		$65,565.16	$11,000	$15,000	$3,500	$11,000	$8,000
11	36		SU		$69,295.30	$11,000	$15,000	$3,500	$11,000	$8,000
12	37	O-5	SU	x	$69,295.30	$10,000	$15,000	$4,000	$11,000	$8,000
13	38		SU		$77,636.70	$10,000	$15,000	$4,000	$11,000	$8,000
14	39		SU		$77,636.70	$9,000	$15,000	$5,000	$11,000	$8,000
15	40		SU		$81,944.86	$9,000	$15,000	$5,000	$11,000	$8,000
16	41		SU		$81,944.86	$9,000	$15,000	$5,000	$11,000	$7,000
17	42		SU	x	$86,077.62	$9,000	$15,000	$5,000	$11,000	$7,000
18	43	O-6	SU		$86,077.62	$8,000	$15,000	$6,000	$11,000	$7,000
19	44		SU		$97,489.60	$8,000	$15,000	$6,000	$11,000	$6,000
20	45		SU	x	$97,489.60	$8,000	$15,000	$6,000	$11,000	$6,000

* Promotion to O-4 occurs at end of YOS 6; to O-5 at end of YOS 12; to O-6 at end of YOS 18

** Use this key to indicate the type of service for each year

GME-1	Internship
GMO	General Medical Officer
IR	In-Service Residency Training
FT	In-Service Fellowship Training
SU	Staff Utilization Tour - Practicing as specialist
FP	Practicing as fellow

*** Active Duty Service Commitment at the end of the current year of service; x = possible separation point

**** MSP amounts reflect combinations of contract lengths that would result in a contract expiration at end of 20 YOS; Zero amounts occur for N years prior to retirement if physician signed MSP contract while having an N year ADSC for training

Table A-7

Physical Medicine & Rehabilitation

Current End YOS	Age	Grade*	Type of Military Service**	ADSC***	RMC	VSP	ASP	BCP	ISP	MSP****
1	26	O-3	GME-1	4	$46,115.52	$1,200	$0	$0	$0	$0
2	27		GMO	3	$46,115.52	$5,000	$15,000	$0	$0	$0
3	28		GMO	2	$49,360.81	$5,000	$15,000	$0	$0	$0
4	29		IR	3	$52,104.01	$5,000	$0	$0	$0	$0
5	30		IR	3	$55,128.01	$5,000	$0	$0	$0	$0
6	31	O-4	IR	3	$55,128.01	$12,000	$0	$0	$0	$0
7	32		SU	2	$63,312.76	$12,000	$15,000	$0	$11,000	$0
8	33		SU	1	$63,312.76	$11,500	$15,000	$2,500	$11,000	$0
9	34		SU	0	$65,565.16	$11,500	$15,000	$2,500	$11,000	$10,000
10	35		SU		$65,565.16	$11,000	$15,000	$3,500	$11,000	$10,000
11	36		SU		$69,295.30	$11,000	$15,000	$3,500	$11,000	$10,000
12	37	O-5	SU	x	$69,295.30	$10,000	$15,000	$4,000	$11,000	$10,000
13	38		SU		$77,636.70	$10,000	$15,000	$4,000	$11,000	$10,000
14	39		SU		$77,636.70	$9,000	$15,000	$5,000	$11,000	$10,000
15	40		SU		$81,944.86	$9,000	$15,000	$5,000	$11,000	$10,000
16	41		SU		$81,944.86	$9,000	$15,000	$5,000	$11,000	$10,000
17	42		SU	x	$86,077.62	$9,000	$15,000	$5,000	$11,000	$9,000
18	43	O-6	SU		$86,077.62	$8,000	$15,000	$6,000	$11,000	$9,000
19	44		SU		$97,489.60	$8,000	$15,000	$6,000	$11,000	$9,000
20	45		SU	x	$97,489.60	$8,000	$15,000	$6,000	$11,000	$0

* Promotion to O-4 occurs at end of YOS 6; to O-5 at end of YOS 12; to O-6 at end of YOS 18

** Use this key to indicate the type of service for each year

GME-1	Internship
GMO	General Medical Officer
IR	In-Service Residency Training
FT	In-Service Fellowship Training
SU	Staff Utilization Tour - Practicing as specialist
FP	Practicing as fellow

*** Active Duty Service Commitment at the end of the current year of service; x = possible separation point

**** MSP amounts reflect combinations of contract lengths that would result in a contract expiration at end of 20 YOS; Zero amounts occur for N years prior to retirement if physician signed MSP contract while having an N year ADSC for training

Table A-7

Plastic & Reconstructive Surgery

Current End YOS	Age	Grade*	Type of Military Service**	ADSC***	RMC	VSP	ASP	BCP	ISP	MSP****
1	26	O-3	GME-1	4	$46,115.52	$1,200	$0	$0	$0	$0
2	27		GMO	3	$46,115.52	$5,000	$15,000	$0	$0	$0
3	28		GMO	2	$49,360.81	$5,000	$15,000	$0	$0	$0
4	29		IR	4	$52,104.01	$5,000	$0	$0	$0	$0
5	30		IR	4	$55,128.01	$5,000	$0	$0	$0	$0
6	31	O-4	IR	4	$55,128.01	$12,000	$0	$0	$0	$0
7	32		IR	4	$63,312.76	$12,000	$0	$0	$0	$0
8	33		SU	3	$63,312.76	$11,500	$15,000	$0	$26,000	$0
9	34		SU	2	$65,565.16	$11,500	$15,000	$0	$26,000	$14,000
10	35		FT	2	$65,565.16	$11,000	$15,000	$3,500	$26,000	$14,000
11	36		FT	2	$69,295.30	$11,000	$15,000	$3,500	$26,000	$14,000
12	37	O-5	FP	1	$69,295.30	$10,000	$15,000	$4,000	$36,000	$8,000
13	38		FP	0	$77,636.70	$10,000	$15,000	$4,000	$36,000	$8,000
14	39		FP		$77,636.70	$9,000	$15,000	$5,000	$36,000	$8,000
15	40		FP		$81,944.86	$9,000	$15,000	$5,000	$36,000	$8,000
16	41		FP		$81,944.86	$9,000	$15,000	$5,000	$36,000	$7,000
17	42		FP	x	$86,077.62	$9,000	$15,000	$5,000	$36,000	$7,000
18	43	O-6	FP		$86,077.62	$8,000	$15,000	$6,000	$36,000	$0
19	44		FP		$97,489.60	$8,000	$15,000	$6,000	$36,000	$0
20	45		FP	x	$97,489.60	$8,000	$15,000	$6,000	$36,000	$0

* Promotion to O-4 occurs at end of YOS 6; to O-5 at end of YOS 12; to O-6 at end of YOS 18

** Use this key to indicate the type of service for each year

GME-1	Internship
GMO	General Medical Officer
IR	In-Service Residency Training
FT	In-Service Fellowship Training
SU	Staff Utilization Tour - Practicing as specialist
FP	Practicing as fellow

*** Active Duty Service Commitment at the end of the current year of service; x = possible separation point

**** MSP amounts reflect combinations of contract lengths that would result in a contract expiration at end of 20 YOS; Zero amounts occur for N years prior to retirement if physician signed MSP contract while having an N year ADSC for training

Table A-7

Psychiatry

Current End YOS	Age	Grade*	Type of Military Service**	ADSC***	RMC	VSP	ASP	BCP	ISP	MSP****
1	26	O-3	GME-1	4	$46,115.52	$1,200	$0	$0	$0	$0
2	27		GMO	3	$46,115.52	$5,000	$15,000	$0	$0	$0
3	28		GMO	2	$49,360.81	$5,000	$15,000	$0	$0	$0
4	29		IR	3	$52,104.01	$5,000	$0	$0	$0	$0
5	30		IR	3	$55,128.01	$5,000	$0	$0	$0	$0
6	31	O-4	IR	3	$55,128.01	$12,000	$0	$0	$0	$0
7	32		SU	2	$63,312.76	$12,000	$15,000	$0	$14,000	$0
8	33		SU	1	$63,312.76	$11,500	$15,000	$2,500	$14,000	$0
9	34		SU	0	$65,565.16	$11,500	$15,000	$2,500	$14,000	$14,000
10	35		SU		$65,565.16	$11,000	$15,000	$3,500	$14,000	$14,000
11	36		SU		$69,295.30	$11,000	$15,000	$3,500	$14,000	$14,000
12	37	O-5	SU	x	$69,295.30	$10,000	$15,000	$4,000	$14,000	$14,000
13	38		SU		$77,636.70	$10,000	$15,000	$4,000	$14,000	$14,000
14	39		SU		$77,636.70	$9,000	$15,000	$5,000	$14,000	$14,000
15	40		SU		$81,944.86	$9,000	$15,000	$5,000	$14,000	$14,000
16	41		SU		$81,944.86	$9,000	$15,000	$5,000	$14,000	$14,000
17	42		SU	x	$86,077.62	$9,000	$15,000	$5,000	$14,000	$10,000
18	43	O-6	SU		$86,077.62	$8,000	$15,000	$6,000	$14,000	$10,000
19	44		SU		$97,489.60	$8,000	$15,000	$6,000	$14,000	$10,000
20	45		SU	x	$97,489.60	$8,000	$15,000	$6,000	$14,000	$0

* Promotion to O-4 occurs at end of YOS 6; to O-5 at end of YOS 12; to O-6 at end of YOS 18

** Use this key to indicate the type of service for each year

GME-1	Internship
GMO	General Medical Officer
IR	In-Service Residency Training
FT	In-Service Fellowship Training
SU	Staff Utilization Tour - Practicing as specialist
FP	Practicing as fellow

*** Active Duty Service Commitment at the end of the current year of service; x = possible separation point

**** MSP amounts reflect combinations of contract lengths that would result in a contract expiration at end of 20 YOS; Zero amounts occur for N years prior to retirement if physician signed MSP contract while having an N year ADSC for training

Table A-7

Radiology (Diagnostic)

Current End YOS	Age	Grade*	Type of Military Service**	ADSC***	RMC	VSP	ASP	BCP	ISP	MSP****
1	26	O-3	GME-1	4	$46,115.52	$1,200	$0	$0	$0	$0
2	27		GMO	3	$46,115.52	$5,000	$15,000	$0	$0	$0
3	28		GMO	2	$49,360.81	$5,000	$15,000	$0	$0	$0
4	29		IR	4	$52,104.01	$5,000	$0	$0	$0	$0
5	30		IR	4	$55,128.01	$5,000	$0	$0	$0	$0
6	31	O-4	IR	4	$55,128.01	$12,000	$0	$0	$0	$0
7	32		IR	4	$63,312.76	$12,000	$0	$0	$0	$0
8	33		SU	3	$63,312.76	$11,500	$15,000	$0	$31,000	$0
9	34		SU	2	$65,565.16	$11,500	$15,000	$0	$31,000	$8,000
10	35		SU	1	$65,565.16	$11,000	$15,000	$3,500	$31,000	$8,000
11	36		SU	0	$69,295.30	$11,000	$15,000	$3,500	$31,000	$8,000
12	37	O-5	SU	x	$69,295.30	$10,000	$15,000	$4,000	$31,000	$8,000
13	38		SU		$77,636.70	$10,000	$15,000	$4,000	$31,000	$7,000
14	39		SU		$77,636.70	$9,000	$15,000	$5,000	$31,000	$7,000
15	40		SU		$81,944.86	$9,000	$15,000	$5,000	$31,000	$7,000
16	41		SU		$81,944.86	$9,000	$15,000	$5,000	$31,000	$6,000
17	42		SU	x	$86,077.62	$9,000	$15,000	$5,000	$31,000	$6,000
18	43	O-6	SU		$86,077.62	$8,000	$15,000	$6,000	$31,000	$0
19	44		SU		$97,489.60	$8,000	$15,000	$6,000	$31,000	$0
20	45		SU	x	$97,489.60	$8,000	$15,000	$6,000	$31,000	$0

* Promotion to O-4 occurs at end of YOS 6; to O-5 at end of YOS 12; to O-6 at end of YOS 18

** Use this key to indicate the type of service for each year

GME-1	Internship
GMO	General Medical Officer
IR	In-Service Residency Training
FT	In-Service Fellowship Training
SU	Staff Utilization Tour - Practicing as specialist
FP	Practicing as fellow

*** Active Duty Service Commitment at the end of the current year of service; x = possible separation point

**** MSP amounts reflect combinations of contract lengths that would result in a contract expiration at end of 20 YOS; Zero amounts occur for N years prior to retirement if physician signed MSP contract while having an N year ADSC for training

Table A-7

Radiology (Therapeutic)

Current End YOS	Age	Grade*	Type of Military Service**	ADSC***	RMC	VSP	ASP	BCP	ISP	MSP****
1	26	O-3	GME-1	4	$46,115.52	$1,200	$0	$0	$0	$0
2	27		GMO	3	$46,115.52	$5,000	$15,000	$0	$0	$0
3	28		GMO	2	$49,360.81	$5,000	$15,000	$0	$0	$0
4	29		IR	4	$52,104.01	$5,000	$0	$0	$0	$0
5	30		IR	4	$55,128.01	$5,000	$0	$0	$0	$0
6	31	O-4	IR	4	$55,128.01	$12,000	$0	$0	$0	$0
7	32		IR	4	$63,312.76	$12,000	$0	$0	$0	$0
8	33		SU	3	$63,312.76	$11,500	$15,000	$0	$31,000	$0
9	34		SU	2	$65,565.16	$11,500	$15,000	$0	$31,000	$8,000
10	35		SU	1	$65,565.16	$11,000	$15,000	$3,500	$31,000	$8,000
11	36		SU	0	$69,295.30	$11,000	$15,000	$3,500	$31,000	$8,000
12	37	O-5	SU	x	$69,295.30	$10,000	$15,000	$4,000	$31,000	$8,000
13	38		SU		$77,636.70	$10,000	$15,000	$4,000	$31,000	$7,000
14	39		SU		$77,636.70	$9,000	$15,000	$5,000	$31,000	$7,000
15	40		SU		$81,944.86	$9,000	$15,000	$5,000	$31,000	$7,000
16	41		SU		$81,944.86	$9,000	$15,000	$5,000	$31,000	$6,000
17	42		SU	x	$86,077.62	$9,000	$15,000	$5,000	$31,000	$6,000
18	43	O-6	SU		$86,077.62	$8,000	$15,000	$6,000	$31,000	$0
19	44		SU		$97,489.60	$8,000	$15,000	$6,000	$31,000	$0
20	45		SU	x	$97,489.60	$8,000	$15,000	$6,000	$31,000	$0

* Promotion to O-4 occurs at end of YOS 6; to O-5 at end of YOS 12; to O-6 at end of YOS 18

** Use this key to indicate the type of service for each year

GME-1	Internship
GMO	General Medical Officer
IR	In-Service Residency Training
FT	In-Service Fellowship Training
SU	Staff Utilization Tour - Practicing as specialist
FP	Practicing as fellow

*** Active Duty Service Commitment at the end of the current year of service; x = possible separation point

**** MSP amounts reflect combinations of contract lengths that would result in a contract expiration at end of 20 YOS; Zero amounts occur for N years prior to retirement if physician signed MSP contract while having an N year ADSC for training

Table A-7

Urology

Current End YOS	Age	Grade*	Type of Military Service**	ADSC***	RMC	VSP	ASP	BCP	ISP	MSP****
1	26	O-3	GME-1	4	$46,115.52	$1,200	$0	$0	$0	$0
2	27		GMO	3	$46,115.52	$5,000	$15,000	$0	$0	$0
3	28		GMO	2	$49,360.81	$5,000	$15,000	$0	$0	$0
4	29		IR	5	$52,104.01	$5,000	$0	$0	$0	$0
5	30		IR	5	$55,128.01	$5,000	$0	$0	$0	$0
6	31	O-4	IR	5	$55,128.01	$12,000	$0	$0	$0	$0
7	32		IR	5	$63,312.76	$12,000	$0	$0	$0	$0
8	33		IR	5	$63,312.76	$11,500	$0	$0	$0	$0
9	34		SU	4	$65,565.16	$11,500	$15,000	$0	$28,000	$8,000
10	35		SU	3	$65,565.16	$11,000	$15,000	$0	$28,000	$8,000
11	36		SU	2	$69,295.30	$11,000	$15,000	$3,500	$28,000	$8,000
12	37	O-5	SU	1	$69,295.30	$10,000	$15,000	$4,000	$28,000	$8,000
13	38		SU	0	$77,636.70	$10,000	$15,000	$4,000	$28,000	$7,000
14	39		SU		$77,636.70	$9,000	$15,000	$5,000	$28,000	$7,000
15	40		SU		$81,944.86	$9,000	$15,000	$5,000	$28,000	$7,000
16	41		SU		$81,944.86	$9,000	$15,000	$5,000	$28,000	$0
17	42		SU	x	$86,077.62	$9,000	$15,000	$5,000	$28,000	$0
18	43	O-6	SU		$86,077.62	$8,000	$15,000	$6,000	$28,000	$0
19	44		SU		$97,489.60	$8,000	$15,000	$6,000	$28,000	$0
20	45		SU	x	$97,489.60	$8,000	$15,000	$6,000	$28,000	$0

* Promotion to O-4 occurs at end of YOS 6; to O-5 at end of YOS 12; to O-6 at end of YOS 18

** Use this key to indicate the type of service for each year

GME-1	Internship
GMO	General Medical Officer
IR	In-Service Residency Training
FT	In-Service Fellowship Training
SU	Staff Utilization Tour - Practicing as specialist
FP	Practicing as fellow

*** Active Duty Service Commitment at the end of the current year of service; x = possible separation point

**** MSP amounts reflect combinations of contract lengths that would result in a contract expiration at end of 20 YOS; Zero amounts occur for N years prior to retirement if physician signed MSP contract while having an N year ADSC for training

Table A-8

Separation after 7 Years of Service: Total Annual Special and Incentive Pays from Years 8 through 20

Current YOS	Anesth*	Card (I)	Derm*	Em Med*	Fam Prac	Gastro	Gen Surg*	Hem/Onc	Int Med	Neurol*	Neur Surg*	OB/GYN*
8	$0	$50,000	$0	$0	$56,000	$50,000	$0	$50,000	$50,000	$0	$0	$0
9	$0	$50,000	$0	$0	$56,000	$50,000	$0	$50,000	$50,000	$0	$0	$0
10	$0	$50,500	$0	$0	$56,500	$50,500	$0	$50,500	$50,500	$0	$0	$0
11	$0	$73,500	$0	$0	$56,500	$60,500	$0	$51,500	$50,500	$0	$0	$0
12	$0	$73,000	$0	$0	$56,000	$60,000	$0	$51,000	$50,000	$0	$0	$0
13	$0	$73,000	$0	$0	$56,000	$60,000	$0	$51,000	$50,000	$0	$0	$0
14	$0	$73,000	$0	$0	$56,000	$60,000	$0	$51,000	$50,000	$0	$0	$0
15	$0	$73,000	$0	$0	$56,000	$60,000	$0	$51,000	$50,000	$0	$0	$0
16	$0	$71,000	$0	$0	$51,000	$58,000	$0	$49,000	$49,000	$0	$0	$0
17	$0	$71,000	$0	$0	$51,000	$58,000	$0	$49,000	$49,000	$0	$0	$0
18	$0	$65,000	$0	$0	$42,000	$52,000	$0	$43,000	$49,000	$0	$0	$0
19	$0	$65,000	$0	$0	$42,000	$52,000	$0	$43,000	$48,000	$0	$0	$0
20	$0	$65,000	$0	$0	$42,000	$52,000	$0	$43,000	$48,000	$0	$0	$0

Current YOS	Occ Med	Opthal*	Orth Surg*	Otolaryn*	Path*	Peds	Phys Med*	Plastic S*	Psych*	Rad (D)*	Rad (T)*	Urology*
8	$50,000	$0	$0	$0	$0	$48,000	$0	$0	$0	$0	$0	$0
9	$50,000	$0	$0	$0	$0	$48,000	$0	$0	$0	$0	$0	$0
10	$50,500	$0	$0	$0	$0	$48,500	$0	$0	$0	$0	$0	$0
11	$50,500	$0	$0	$0	$0	$48,500	$0	$0	$0	$0	$0	$0
12	$50,000	$0	$0	$0	$0	$48,000	$0	$0	$0	$0	$0	$0
13	$50,000	$0	$0	$0	$0	$48,000	$0	$0	$0	$0	$0	$0
14	$50,000	$0	$0	$0	$0	$48,000	$0	$0	$0	$0	$0	$0
15	$50,000	$0	$0	$0	$0	$48,000	$0	$0	$0	$0	$0	$0
16	$49,000	$0	$0	$0	$0	$47,000	$0	$0	$0	$0	$0	$0
17	$49,000	$0	$0	$0	$0	$47,000	$0	$0	$0	$0	$0	$0
18	$49,000	$0	$0	$0	$0	$47,000	$0	$0	$0	$0	$0	$0
19	$48,000	$0	$0	$0	$0	$46,000	$0	$0	$0	$0	$0	$0
20	$48,000	$0	$0	$0	$0	$46,000	$0	$0	$0	$0	$0	$0

* Not able to separate after 7 years of service due to active duty service commitments

Table A-8

Separation after 12 Years of Service: Total Annual Special and Incentive Pays from Years 13 through 20

Current YOS	Anesth	Card (I)*	Derm	Em Med	Fam Prac	Gastro*	Gen Surg	Hem/Onc*	Int Med	Neurol	Neru Surg*	OB/GYN
13	$66,000	$0	$51,000	$59,000	$56,000	$0	$65,000	$0	$50,000	$50,000	$0	$68,000
14	$66,000	$0	$51,000	$59,000	$56,000	$0	$65,000	$0	$50,000	$50,000	$0	$68,000
15	$66,000	$0	$51,000	$59,000	$56,000	$0	$65,000	$0	$50,000	$50,000	$0	$68,000
16	$66,000	$0	$51,000	$59,000	$52,000	$0	$64,000	$0	$48,000	$50,000	$0	$68,000
17	$65,000	$0	$50,000	$58,000	$52,000	$0	$64,000	$0	$48,000	$49,000	$0	$67,000
18	$65,000	$0	$50,000	$58,000	$52,000	$0	$55,000	$0	$42,000	$49,000	$0	$67,000
19	$65,000	$0	$50,000	$58,000	$51,000	$0	$55,000	$0	$42,000	$49,000	$0	$67,000
20	$58,000	$0	$43,000	$51,000	$51,000	$0	$55,000	$0	$42,000	$42,000	$0	$60,000

Current YOS	Occ Med	Opthal	Orth Surg	Otolaryn*	Path	Peds	Phys Med	Plastic S*	Psych	Rad (D)	Rad (T)	Urology*
13	$50,000	$57,000	$75,000	$0	$52,000	$48,000	$50,000	$0	$57,000	$67,000	$67,000	$0
14	$50,000	$57,000	$75,000	$0	$52,000	$48,000	$50,000	$0	$57,000	$67,000	$67,000	$0
15	$50,000	$57,000	$75,000	$0	$52,000	$48,000	$50,000	$0	$57,000	$67,000	$67,000	$0
16	$48,000	$57,000	$74,000	$0	$51,000	$47,000	$50,000	$0	$57,000	$66,000	$66,000	$0
17	$48,000	$57,000	$74,000	$0	$51,000	$47,000	$49,000	$0	$53,000	$66,000	$66,000	$0
18	$40,000	$57,000	$65,000	$0	$45,000	$47,000	$49,000	$0	$53,000	$60,000	$60,000	$0
19	$40,000	$57,000	$65,000	$0	$45,000	$46,000	$49,000	$0	$53,000	$60,000	$60,000	$0
20	$40,000	$57,000	$65,000	$0	$45,000	$46,000	$40,000	$0	$43,000	$60,000	$60,000	$0

* Not able to separate after 12 years of service due to active duty service commitments

Table A-8

Separation after 17 Years of Service: Total Annual Special and Incentive Pays from Years 18 through 20

Current YOS	Anesth	Card (I)	Derm	Em Med	Fam Prac	Gastro	Gen Surg	Hem/Onc	Int Med	Neurology	Neuro Surg	OB/GYN
18	$65,000	$65,000	$50,000	$58,000	$52,000	$52,000	$55,000	$43,000	$49,000	$49,000	$65,000	$67,000
19	$65,000	$65,000	$50,000	$58,000	$51,000	$52,000	$55,000	$43,000	$48,000	$49,000	$65,000	$67,000
20	$58,000	$65,000	$43,000	$51,000	$51,000	$52,000	$55,000	$43,000	$48,000	$42,000	$65,000	$60,000

Current YOS	Occ Med	Opthal	Ortho Surg	Otolaryn	Path	Peds	Phys Med	Plastic S	Psych	Rad (D)	Rad (T)	Urology
18	$49,000	$57,000	$65,000	$59,000	$45,000	$47,000	$49,000	$65,000	$53,000	$60,000	$60,000	$57,000
19	$48,000	$57,000	$65,000	$59,000	$45,000	$46,000	$49,000	$65,000	$53,000	$60,000	$60,000	$57,000
20	$48,000	$57,000	$65,000	$59,000	$45,000	$46,000	$40,000	$65,000	$43,000	$60,000	$60,000	$57,000

Appendix B: Private Sector Survey Participants

Group Practices (26)

Camino Medical Group (Sunnyvale, CA)
Children's Associated Medical Group, Inc. (San Diego, CA)
The Children's Heart Center (Atlanta, GA)
Children's Physicians/Children's Hospital (Omaha, NE)
Clinical Care Associates of the University of Pennsylvania Health System (Radnor, PA)
Cook Children's Physician's Network (Fort Worth, TX)
Emory Clinic (Atlanta, GA)
Fairfield Medical Group, Inc. (Fairfield, CA)
Harvard Vanguard Medical Associates (Brookline, MA)
Hitchcock Clinic (Lebanon, NH)
Kelsey-Seybold Clinic, P.A. (Houston, TX)
Lovelace Health Systems, Inc. (Albuquerque, NM)
Mayo Clinic (Rochester, MN)
MedPro (Phoenix, AZ)
Mercy Health Centers (San Diego, CA)
MeritCare Medical Group (Fargo, ND)
Munson Healthcare, Inc. (Traverse City, MI)
Northwestern Medical Faculty Foundation, Inc. (Chicago, IL)
Providence Medical Group (Seattle, WA)
Sharp HealthCare (San Diego, CA)
Southwest Medical Associates (Las Vegas, NV)
SSM Health Care (St. Louis, MO)
University of Minnesota Physicians (Minneapolis, MN)
Valley Children's Hospital Specialty Medical Group (Fresno, CA)
Virginia Mason Medical Center (Seattle, WA)
York Health System Medical Group (York, PA)

HMOs (14)

Blue Cross Blue Shield of Michigan (Detroit, MI)
Carolina Permanente Medical Group, P.A. (Raleigh, NC)
CIGNA Corporation (Bloomfield, CT)
Colorado Permanente Medical Group, P.C. (Denver, CO)
Family Health Plan Cooperative (Milwaukee, WI)
Group Health Cooperative (Madison, WI)
Group Health Permanente (Seattle, WA)
Horizon Blue Cross Blue Shield of New Jersey (Newark, NJ)
M.I.T. Medical Department (Cambridge, MA)
Northeast Permanente Medical Group, P.C. (Farmington, CT)

Northwest Permanente Medical Group, Inc. (Portland, OR)
Ohio Permanente Medical Group, Inc. (Cleveland, OH)
The Permanente Medical Group, Inc. (Oakland, CA)
Southern California Permanente Medical Group (Pasadena, CA)

Hospital-Based Facilities (51)

Advocate Health Care (Oak Brook, IL)
All Children's Hospital (St. Petersburg, FL)
Alta Bates Medical Center (Berkeley, CA)
Atlantic Health System (Florham Park, NJ)
Aurora Health Care, Inc. (Milwaukee, WI)
Baylor College of Medicine (Dallas, TX)
Brockton Hospital (Brockton, MA)
Children's Health Care Associates (Philadelphia, PA)
Children's Health System (Milwaukee, WI)
The Children's Hospital (Denver, CO)
Children's Hospital (New Orleans, LA)
Children's Hospital Medical Center of Akron (Akron, OH)
Children's Hospital of Alabama (Birmingham, AL)
The Children's Medical Center (Dayton, OH)
Children's Mercy Hospital (Kansas City, MO)
Children's Specialty Group, PLLC (Norfolk, VA)
Connecticut Children's Medical Center (Hartford, CT)
Detroit Medical Center (Detroit, MI)
DuBois Regional Medical Center (DuBois, PA)
Egleston Children's Health Care System (Atlanta, GA)
Fairview Hospital - Cleveland Clinic Health System (Cleveland, OH)
Fairview Hospital and Healthcare Services (Minneapolis, MN)
Greenville Hospital System (Greenville, SC)
Intermountain Health Care, Inc. (Salt Lake City, UT)
Latrobe Area Hospital (Latrobe, PA)
Legacy Health System (Portland, OR)
Lehigh Valley Hospital (Allentown, PA)
Long Beach Memorial Medical Center (Long Beach, CA)
Madigan Army Medical Center (Tacoma, WA)
Mary Imogene Bassett Hospital (Cooperstown, NY)
MedStar Baltimore Division, dba Helix Health System (Lutherville, MD)
Memorial Hospital (Colorado Springs, CO)
Memorial Sloan-Kettering Cancer Center (New York, NY)
Mercy Health Services (Farmington Hills, MI)
Methodist Medical Center of Illinois (Peoria, IL)
Miami Children's Hospital (Miami, FL)
Mt. Clemens General Hospital (Mount Clemens, MI)
North Memorial Medical Center (Robbinsdale, MN)
Parkland Health and Hospital System (Dallas, TX)
Phoenix Children's Hospital (Phoenix, AZ)

Pinnacle Health System (Harrisburg, PA)
Presbyterian Healthcare Services (Albuquerque, NM)
Providence Health System - Oregon Region (Portland, OR)
Sarah Bush Lincoln Health Center (Mattoon, IL)
Southern New Hampshire Regional Medical Center (Nashua, NH)
Southwestern Vermont Medical Center (Bennington, VT)
St. Joseph's Regional Medical Center, Inc. (South Bend, IN)
State of Minnesota Department of Human Services (St. Paul, MN)
University of Texas Medical Branch at Galveston (Galveston, TX)
Valley Medical Center (Renton, WA)
York Hospital (York, PA)

Appendix C: Benefit Value Comparison (BVC) Methodology

The salary-equivalent values allocated with each employee benefit are derived through the use of a "standard cost" model. The purpose of this approach is to eliminate the effect of differences in employee population, financing methods and other factors that can result in identical benefit programs in two different organizations having different costs. Under this approach, standard assumptions were derived for all factors other than benefit provisions (e.g. employee population, financing method, etc.) and applied uniformly to all organizations. The "standard assumptions" are based on the national average private sector exempt employee population and the most common funding methods.

The methods used to value each type of benefit are those generally used by companies to fund each benefit. Therefore, group insurance rates were developed through the use of group rate manuals of major underwriters for those benefits that are generally insured. The defined benefit retirement value factors were developed reflecting major companies' employee populations and experience using reasonable actuarial assumptions as to interest, salary increases and other factors that affect retirement payments.

The results are salary-equivalent benefit values that represent the approximate cost of providing each benefit program to an average salaried employee population in a large private sector organization. Because these values are based on a standard private sector work force and funding assumptions, they will be referred to as standard BVCs.

Standard BVC values are then reduced by the amount of any employee cost sharing in order to reflect that portion of the plan that is paid for by the employer. Accordingly, these values are called employer-provided or EP values. For plans that require an employee contribution, these salary-equivalent EP values represent only the portion of the total value that is employer paid. Defined contribution retirement plans (401(k) plans) provide a good example. The benefit value for the private sector 401(k) plan is based only on the employer matching contribution. The model assumes that participants will contribute enough of their own salary to receive the maximum employer match. In this study, the most prevalent private sector practice resulted in a maximum 2.5 percent employer matching contribution.

In addition to the employer-provided standard BVCs, the Navy and private sector benefits were also valued as if they had been applied to the Navy workforce. These are referred to as military employer-provided BVCs and are the benefit values used in this study. If there existed a known DoD cost analogous to a BVC, such as the normal cost of the military retirement system, that cost was used as the BVC and the private sector BVC was recalibrated on that basis. While this process produces a different set of values for each comparator's benefits package, the relative values of the different benefits remain unchanged. The values are simply rescaled. However, the sum of the values of all benefits does change as more value is based on the unit cost of some programs and less on the unit cost of others. The advantage of this approach is that it uses known military

benefit cost factors, employs the demographics of the military work force, and is, therefore, a more appropriate baseline for this analysis.

The BVCs shown in the study are the average values (costs) for benefits for the Navy and private sector physician work forces, assuming a workforce with military demographic characteristics. As averages, the values do not represent the values for any specific individual. While it is not possible to present the values for specific individuals it is important to understand how the values might vary depending on an individual's circumstances.

Some benefits, such as annual leave in the Navy, have approximately the same economic value for all members. Most of the benefits, however, can vary widely depending on the circumstances of the employee. For instance, health insurance has little economic value for a young, healthy singe employee or servicemember but the economic values are much higher than the average BVC for a married employee with a spouse or child with a severe medical problem.

The variation in economic value is most diverse for the retirement system. A young uniformed service physician who does not plan to stay beyond the first obligated period of service will receive no economic value from the retirement system. However, a uniformed service physician with 17 years service will receive a benefit that is worth much more than the average BVC simply by staying to 20 years.

The range is even wider when it comes to the employee's perceived value of benefits. Even an employee who might eventually stay to retirement will place little value on the retirement benefit early in the career. On the other hand, the employee with a dependent who is at risk for severe medical problems may place a much higher value on health care than a strict economic analysis would predict.

In considering the BVCs it is important to recognize what the value is and to understand what it is not. The BVC is an average cost of benefits for all employees. It is not the economic value for any individual member, and it is even less the perceived value of any individual member. The BVCs provide a quantitative measure of the relative cost of the overall benefits package. The use of the analysis should be tempered with consideration of the economic and perceived values for the individuals being considered.

STABLE FUNDING

Admiral NELSON. The second area of concern to me and it is one I raised last year. That is the need for stable, predictable, and sufficient funding for the direct care system. It is necessary for the three medical departments to run our hospitals and our clinics, to make them the most efficient that they can be.

Our military health system optimization plan emphasizes maximum use of the direct care system for hospitals and clinics, but

adequate business planning and implementation of that requires dependable resources throughout the year. I think we have a responsibility, just as Senator Domenici said, we have a responsibility to bring you an honest health care budget request, one that recognizes the true costs of quality health care.

We as services cannot thrive on the year-end emergency supplementals. The year-end supplementals do not allow us investment in the future. It allows us to take care of immediate things, but not really invest for the future. We have to get past the supplementals.

PREPARED STATEMENT

We are committed to working with this committee, to working with the Congress, to improve military health care. I appreciate the support that this committee has been over the years that I have been surgeon general and I thank you very much for that.

Thank you, sir.

[The statement follows:]

PREPARED STATEMENT OF VICE ADMIRAL RICHARD A. NELSON

Chairman Stevens, Senator Inouye and distinguished Senators, thank you for the opportunity to review Navy Medicine's accomplishments in 2000 and plans for the future.

This has been a challenging and rewarding year for the Navy Medical Department. We have successfully responded to many challenges placed before us. We continue to face a period of unprecedented change for medicine. Our health system must remain flexible as we incorporate new technologies and advances in medical practice, struggle to maintain our facilities, optimize our health care delivery, embrace new health benefits, enhance patient safety, and increase our ability to provide care to beneficiaries over age 65 in the coming months. Navy Medicine has been working tirelessly to maintain our superior health services in order to keep our service members healthy and fit and ready to deploy while providing a high quality health benefit to all our beneficiaries. As you know, healthcare is an especially important benefit to service members, retirees and family members. It is an important recruitment and retention tool. For active duty members and their families it's one of the key quality of life factors affecting both morale and retention. Additionally, the benefits afforded to retirees are viewed by all as an indicator of the extent to which we honor our commitments. The expanded health care benefits in last year's National Defense Authorization Act were most welcomed by all our beneficiaries and will help restore the faith of our retirees in Military Health Care. However, we must also ensure the provisions are delivered and that sufficient resources are available now and in the future to avoid making a commitment we can't afford to keep.

Global Force Health Protection

The year 2000 has seen Navy Medical Department personnel assigned to Navy and Marine Corps forces world wide, many of whom are deployed with our underway ships or in forward areas. This year, thousands of Navy medical personnel supported joint service, Marine Corps, and Navy operations and training exercises.

Our medical personnel have provided humanitarian relief to many countries around the globe. During periods of social unrest, Navy medical personnel provided environmental and preventive medical assistance in Guatemala, Columbia, Peru and Micronesia. In support of our national strategy to assist governments pursuing democracy and independence, our medical personnel assisted in Russia, East Timor, Indonesia, Samoa, and Mozambique, coordinating humanitarian relief, epidemiology, preventive medicine, dentistry, and ophthalmology support. Despite the challenges of working in austere environments, these deployments have provided a valuable opportunity to hone our medical skills and test our readiness while providing relief to people in need.

During the tragic events of recent military and commercial airline crashes, Navy medicine quickly mobilized Special Psychiatric Rapid Intervention Teams (SPRINT) to assist servicemen, families and civilians through their grieving process. Most recently, a SPRINT team deployed to assist the 318 uninjured crewmembers of USS COLE after the recent terrorist attack in Yemen. In addition, a task-organized Fleet

Surgical Team deployed to augment the medical capability in theater in support of the forces still operating in the high threat environment.

As we move into this new millennium, our Navy and Marine Corps men and women are called upon to respond to a greater variety of challenges worldwide. This means the readiness of our personnel is now more important than ever. Military readiness is directly impacted by Navy Medicine's ability to provide health protection and critical care to our Navy and Marine Corps forces, which are the front line protectors of our democracy. That's what military medicine is all about—keeping our forces fit to fight.

I am also pleased to report that we recently implemented a new Reserve Utilization Plan (RUP) that will optimize our use of reservists during peacetime and contingencies. The Medical RUP is Navy Medicine's plan for achieving full integration of Medical Reserves into the Navy Medical Department. Prior to the Total Force Policy, the Medical Reserves were considered a "Force in Reserve," to be called upon during national emergency.

Taking Care of the Fleet

Under our theme of "Force Health Protection," we will place special emphasis on keeping Sailors and Marines healthy and fit and ensuring our deployable platforms are ready to deliver effective casualty care—Manage Health Not Just Illness. The Force Commander Health Promotion Unit Award (which we call the Green "H") is used to measure one aspect of Fleet medical readiness. It enhances the health, fitness and mental well being of our Sailors through their involvement and participation in unit health promotion initiatives. This award is a tangible, visible measure of the operational force's progress toward prevention and population health, since those commanding officers who earn the Green "H" are authorized to paint it on their ship's superstructure.

This year, more than 130 ships or units have earned the right to paint the Green "H" on their bridge wings, reflecting decreases in alcohol related events and tobacco use rates, as well as increased physical readiness test scores.

Readiness

Navy Medicine tracks and evaluates overall medical readiness using the readiness of the platforms as well as the readiness of individual personnel assigned to those platforms. The platforms include the two one thousand bed hospital ships, 6 Active duty and 4 Reserve 500 Bed Fleet hospitals, as well as medical units supporting Casualty Receiving and Treatment Ships (CRTS), units assigned to augment Marine Corps, and overseas hospitals. One of our measures of readiness is whether we have personnel with the appropriate specialty assigned to the proper billets; that is, do we have surgeons assigned to surgeon billets and Operating Room Nurses assigned to Operating Room Nurse billets, etc.

The readiness of a platform also involves issues relating to equipment, supplies and unit training. Currently these are tracked separately. Navy Medicine is developing a metric to measure the readiness of platforms using the Status of Resources and Training System (SORTS) concept tailored specifically to measure specific medical capabilities such as surgical care or humanitarian services. Navy Medicine also monitors the deployment readiness of individual personnel within the Navy Medical Department. Personnel are required to be administratively ready and must meet individual training requirements such as shipboard fire fighting, fleet hospital orientation, etc. The compliance of individual personnel is tracked through a database called Standard Personnel Management System (SPMS) and reported to Headquarters.

Our People

People are critical to accomplishing Navy Medicine's mission and one of the major goals from Navy Medicine's strategic plan is to enhance job satisfaction. We believe that retention is as important if not more so than recruiting, and in an effort to help retain our best people, there has been a lot of progress. Under our strategic plan's "People" theme, we will focus on retaining and attracting talented and motivated personnel and move to ensure our training is aligned with the Navy's mission and optimization of health. Their professional needs must be satisfied for Navy Medicine to be aligned and competitive. Their work environment must be challenging and supportive, providing clear objectives and valuing the contributions of all.

All Navy Medicine personnel serving with the Marine Corps face unique personal and professional challenges. Not only must they master the art and science of a demanding style of warfare, but they must also learn the skills of an entirely separate branch of the armed services. Whether assigned to a Marine Division, a Force Service Support Group, or a Marine Air Wing, Navy medical personnel must know how

Marines fight, the weapons they use, and the techniques used to employ them effectively against harsh resistance. To excel in this endeavor is an accomplishment that should be recognized on a level with other Navy warfare communities.

Recently, Navy leadership approved a new program allowing Hospital Corpsmen and Dental Technicians, as well as other ratings assigned to the Fleet Marine Force, to qualify for a Fleet Marine Force warfare pin. This designation and associated warfare pin is an outward recognition of the important role our corpsmen and dental techs play in this unique duty. It will be a positive motivator for current and future HMs and DTs supporting the Marines in the field.

Finally, as we work to meet the challenges of providing quality health care, while simultaneously improving access to care and implementing optimization, we have not forgotten the foundation of our health care—our providers. We appreciate and value our providers' irreplaceable role in achieving our vision of "superior readiness through excellence in health services."

Within each of our medical facilities there has been an overall initiative to reward clinical excellence and productivity and to ensure that those who are contributing the most are receiving the recognition they deserve. Additionally, selection board precepts now emphasize clinical performance in the definition of those best and fully qualified for promotion.

Medical Corps

This past year, the three Surgeons General asked a Flag Officer Review Board to review special pays and propose changes to improve critical provider retention and satisfaction. I also asked the Center for Naval Analysis to complete a study on provider satisfaction to assess the extent to which changes in special pay would promote retention. The goal is to make the pays more flexible, raise the caps, and remove some of the restrictive aspects of the contracts with the intent of demonstrating early in an officer's career that they are valued. If we don't value our providers, we cannot expect them to continue to provide outstanding medical service. We track retention by the use of loss rates compared to beginning full strength numbers. The annual loss rates for the Medical Corps, as a whole has held steady at 10–11 percent and the primary care communities are healthy. However, I am concerned about our retention rates for enlisted and officer medical specialties. Loss rates within surgical specialties are high and we have dramatically low retention rates. Specialties such as General Surgery have a loss rate over 22 percent and Orthopedic Surgery has a loss rate over 27 percent. Other equally important wartime critical specialties are also undermanned, including anesthesia (93 percent) and neurosurgery (57 percent). We predict a large exodus of radiologists in the next two years as many reach the end of their service obligations. Distribution problems are significant because we have not been able to keep pace with attrition in some specialties. There exist significant pay gaps between our surgical specialists, and their civilian counterparts (frequently in excess of $100 thousand per year). Reductions in the Health Professions Scholarship Program (HPSP) several years ago, coupled with reductions in Graduate Medical Education training pipelines, have contributed to significant shortages of providers. We have several military treatment facilities where we are unable to assign a military radiologist, which we have to replace with high cost contract support.

Dental Corps

After three years of increasing annual loss rates, the dental corps annual loss rate for fiscal year 1999 was down to 8.3 percent. While still too early for conclusive analysis, this improvement may have resulted from increased special pay for military dentists and resolving manning shortages resulting from enhanced accession programs. Continuation of such initiatives is essential to ongoing efforts to access and retain qualified officers.

Nurse Corps

Although, overall fiscal year 2000 data revealed generally higher retention levels than in prior years, the nationwide nursing shortage has adversely impacted our Nurse Corps. In direct competition with the private sector for a diminishing pool of appropriately prepared registered nurses, Navy faces shortages in the nurse anesthesia, maternal-child, psychiatric and operating room specialties, that must be addressed if we are to effectively meet both operational and peacetime healthcare delivery missions. Currently, only nurse anesthetists are authorized to receive incentive special pay. That program has been a successful retention tool thus far, but the civilian-military pay gap in that field continues to grow. In order to more accurately gauge compensation gaps for both generalist and advanced practice nurses, the Nurse Corps is also included in the Center for Naval Analyses study on Health Professions Retention Accession Incentives. Results of the study will provide a tool for

future strategies. Further retention bonuses may be needed to retain all types of nurses as competition increases for the dwindling supply.

Medical Service Corps

Medical Service Corps as a whole, enjoys a relatively stable annual loss rate of nine percent, however loss rates vary significantly between specialties. Many of our health professionals incur high educational debts prior to commissioning and the amount of debt load increases with succeeding accessions. In addition, a substantial pay gap between military and civilian licensed professionals has resulted in decreasing retention. There is some variation over time of those specialties that are most difficult to recruit and retain, although some are consistently on our critical list. Currently, optometrists, pharmacists, psychologists and environmental health officers present the greatest challenges.

Enlisted Members

Navy Medicine's enlisted member retention statistics compared to Navy Line communities are fairly similar. However, problems arise in specialized areas such as pharmacy, radiology, and search and rescue fields. In the Dental community, shortfalls are beginning to appear both in recruitment and retention. An enlistment bonus for HMs and DTs is needed to help us more effectively compete in today's tight employment market. Increasing the selective reenlistment bonus (SRB) cap and authorizing SRB payments for advanced technical Navy Enlisted Classifications (NECs) would help improve retention in the ratings, particularly where there is a substantial pay delta with civilian counterparts.

Uniformed Services University of the Health Sciences

As the Executive Agent of the Uniformed Services University of the Health Sciences (USUHS) I would like to comment on the achievements of the University and its contributions. I am proud to inform you that the Secretary of Defense recently awarded USUHS the Joint Meritorious Unit Award for exceptionally meritorious service from July 1, 1990 to July 1, 2000. The University has graduated 3,000 military physicians with a better overall understanding of the military, a retention rate almost twice as long as scholarship physicians and 42 percent of the graduates serving in operational or leadership positions. The University also provided over $85 million in clinical services to the military services and has trained over 200,000 defense personnel with an annual cost avoidance of over $40 million. The Casualty Care Research Center of the University has trained over 4,000 emergency health providers. I would also like to point out that USUHS' unique military training offers an enormous intrinsic value to our hospitals and operational billets that cannot be measured.

Make TRICARE Work

We continue to make significant progress in improving TRICARE and enjoy the full support of the senior line leadership. Our new Chief and Vice Chief of Naval Operations (CNO, VCNO) have already shown a great degree of interest and appreciation for Navy Medicine and are providing continued support in making TRICARE work. The Defense Medical Oversight Committee (DMOC) continues to be an active and influential body when it comes to Defense Health Program (DHP) funding requirements in the context of other service decisions and management and reengineering initiatives. Line and medical leadership is looking for ways to improve the delivery of the health care benefit.

As stated earlier, the recent passage of the Fiscal Year 2001 National Defense Authorization Act (NDAA) brings expanded health care benefits to our beneficiaries. Although the new law includes initiatives such as TRICARE Prime Remote for families, elimination of co-pays for active duty family members, and a catastrophic cap reduction, its greatest impact will be enhancing the healthcare benefit for our senior retirees and their families. In looking at our strategic plan's "Health Benefit" theme, we will concentrate on informing our customers, with the goal that all our beneficiaries will be knowledgeable about and confident in their health benefits. This objective will be even more critical as we implement the recent legislative changes that improve the health benefit. We will also focus on improving access, so beneficiaries will have timely access to services, assistance and information. And we will do all we can to simplify the delivery of the health benefit.

This legislation is a milestone in military health care not seen since the initiation of the CHAMPUS program more than thirty years ago. We are working with DOD (Health Affairs), the TRICARE Management Activity and the other services to put these changes into effect.

Embrace Best Business and Clinical Practices—Optimization

There is no more important effort in military medicine today than implementing the MHS Optimization Plan to provide the most comprehensive health services to our Sailors, Marines and other beneficiaries. Optimization is based upon the pillar of readiness as our central mission and primary focus.

For several years now, we have attempted to shift our mindset from treating illnesses to managing the health of our patients. Fewer man-hours will be lost due to treatment of injury or illness because we manage the health of our service men and women, which keeps them fit and ready for duty. With this in mind, TRICARE Management Activity and the three services created an aggressive plan to support development of a high performance comprehensive and integrated health services delivery system. We took lessons learned from the best practices of both military and civilian health plans. The outcome was the MHS Optimization Plan. Full implementation of this plan will result in a higher quality, more cost effective health service delivery system.

The MHS Optimization Plan is based on three tenets. First, we must make effective use of readiness-required personnel and equipment to support the peacetime health care delivery mission. Second, we must equitably align our resources to provide as much health service delivery as possible in the most cost-effective manner—within our MTFs. And third, we must use the best, evidence-based clinical practices and a population health approach to ensure consistently superior quality of services.

Although many commands report numerous efforts to optimize or improve their facility, I am concerned that frequently these efforts are not tied to specific goals or objectives. This is where performance measurement comes in. Performance measurement provides focus and direction, ensures strategic alignment and serves as a progress report.

A part of the Optimization Plan is identifying a specific Primary Care Manager for each beneficiary. Assigning PCMs by name will improve access and continuity of care. Each PCM will manage the health of their patient and coordinate their care. When necessary, PCMs will refer patients to a specialist. Each PCM is a member of a health care team. This team will provide support when the PCM takes leave, has training or is deployed. The team concept further enhances continuity and customer satisfaction. The end result is a healthier population, which is a primary goal of the Optimization effort.

In the Navy, we are making available comparative performance data on all facilities—so MTF commanders can see where they stand and learn from each others' successes. Ultimately, it allows us to raise the bar for the whole organization. As we continue in our journey of applying performance measurement, we will begin to identify targets for our system and for each MTF. Holding MTF COs accountable for meeting those targets will be the next step in this evolution.

When Navy Medicine first decided that using metrics would help us drive organizational change, we asked the Center for Naval Analysis to help us. Once the leadership of Navy Medicine had come to agreement on our Mission, Vision, Goals and Strategies, we partnered with CNA to develop a fairly complex system of composite metrics that we can look at to see if we are going in the right direction. We are completing our second year with these metrics and have found that many of the measures have data that only changes once a year. This may be fine to measure how well we are doing in moving towards some of our strategic goals, but they are not adequate by themselves to manage the complexity of the Navy Medical department. This year we've added two other "levels" of metrics. One is a group of Annual Plan measures. After reviewing our strategic plan in light of the current environment, understanding the strengths, weaknesses, opportunities, and threats to our organization, we identified several priorities for the year. We then identified measures to track progress on these items—and this data has to be measurable at least quarterly. Finally, we have just identified 20–25 measures for our "Dashboard of Leading Indicators" that our leadership will be looking at on a monthly basis. Once we look at the historical data for these dashboard indicators, we will be setting not only targets for where we want to be but also action triggers in case we are going the wrong direction in some area. We will agree on a level below which, we will no longer just watch and see if it improves, but we will take action to change the processes. So you can see it is an ongoing journey or evolution—and I believe each of the services is involved in a similar evolution. We in the Navy have web based our Optimization Report Card and the satisfaction survey data is provided to MTF commanders in a more user friendly display on a quarterly basis.

Dental

Let me provide one more example of effective use of performance measures that is taking place within our Navy Dental organization. In June 1998, senior dental

leaders, including Commanding Officers, implemented 12 system metrics to be collected uniformly across all levels of Navy Dentistry. The system-wide application and utilization of this initiative has lead to improved alignment while documenting higher performance. During the past seven quarters, improvements in the data collection process enabled valid and useful data based decision-making. This metric-based management has produced significant outcomes:

—Dentist Productivity increased by 12 percent.

—Operational Dental Readiness increased from 90 to 96 percent.

—Dental Health Index increased from 22 to 34 percent.

A composite metric "dashboard" was developed as a tool to allow overall performance evaluation while considering all metrics simultaneously. This tool is used quarterly to monitor the performance and effectiveness of each Command (and even down to the branch level at 170 branches, and 13 Naval Hospitals and 59 ships). All dental units achieve a composite score ranking. It is significant to note that today's lowest scoring dental unit has a higher composite performance score than that of the top performer 12 months ago. Guided by metrics, Navy Dentistry moved military dental billets and eliminated substantial contract costs. These dollars are then available as working capital to meet requirements within the dental system to further increase production and efficiency.

Optimization Resourcing Levels

Our analysis of our direct care system indicates that in many cases, Military Treatment Facilities are not optimally staffed and funded to deliver efficient health care. The direct health care system can not function at optimal levels in an austere fiscal environment. For example, a Family Physician working with two clinical support staff may be able to effectively care for a panel of only 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. Clinical support staff to clinical provider ratio is presently 1.81. The MHS Optimization target is 3.50. Additional staff in the following categories is also necessary: Case Managers to coordinate care for the top 1 percent of medically complex cases, freeing clinical providers to do more direct patient care. Utilization Managers are needed to analyze trends in ambulatory care usage by diagnostic and patient category, and develop plans for population health interventions. Medical Record Coders to perform accurate and detailed coding to account for workload and performance, thus ensuring marketshare is accounted for in comparison with contractor performed work. And Pharmacy technicians are needed to support increased prescription volume with workload recapture. I am 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. However, I am firmly committed to changing the business practices and culture of Navy Medicine to recapture workload currently being done in the private sector. Overall, the area of resources continues to be one of concern. We do not have adequate financial resources to provide what is needed within the Direct Care System.

The rapidly escalating costs of the Managed Care Support Contracts places the Direct Care System at risk. As these costs increase, there is constant pressure to find relief by reducing the Direct Care Program funding in our Military Treatment Facilities to pay for the Managed Care Contracts. The Direct Care System cannot continue to be the source for the Department's relief from these unplanned and unexpected increased costs without serious degradation of the most cost effective portion of our Military Health System.

As a result of these internal pressures, I have restricted the resourcing of the Direct Care Program of Navy Medicine to a survival basis over the past two years. This action has left us in a position of detracting from our facility maintenance, equipment replacement, and continuing medical education programs to ensure that we use our limited resources for the delivery of the healthcare benefit. As we continue to underfund our facilities maintenance, this will eventually come back to haunt us in more costly repair requirements, higher Military Construction Program requirements, and higher equipment replacement requirements.

Of concern is also the replacement cycle for our MTFs and maintenance of real property. We now face an average facility replacement cycle of over 100 years, compared to data indicating the private sector is less than 25 years. This does not mean that the private sector plans to replace their facilities every 25 years, but implies

that a major renovation will be required every 25 years to remain competitive. If we do not spend more on maintenance requirements, a significant degradation of our infrastructure will result.

A replacement hospital is badly needed for our beneficiaries in Naples, Italy. The new hospital is almost 30 percent complete. The U.S. Navy contract with the Italian developer currently calls for leasing the hospital upon its completion in late 2002. There is also the option to buyout the facility, which may offer advantages over leasing.

Quality of Care

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. 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 MHS Optimization Plan will play a key role in allowing enrollee assignment to a PCM by name.

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.

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 System II (CHCS II) of computerized patient records to improve documentation of care provided including the follow up of laboratory and radiology exams, and pharmacy orders.

—Deployment of the Pharmacy Data Transaction System (PDTS) to prevent prescription and allergy errors in a highly mobile population.

Medical Research

Navy Medicine also has a proud history of incredible medical research successes from our CONUS and OCONUS laboratories. Our research achievements have been published in professional journals, received patents and have been sought out by industry as partnering opportunities.

The quality and dedication of the Navy's biomedical R&D community was exemplified this year as three researchers were selected to receive prestigious awards for their work. CDR Daniel Carucci, MC, USN received the Joints Chiefs of Staff Award for Excellence in Military Medicine for his work as an operational flight surgeon caring for Marines and Sailors and as a cutting-edge molecular biologist working on advanced malaria genomics research. His current efforts in malaria research are providing new and exciting avenues for malaria research and will accelerate the development of novel malaria vaccines and drugs.

As other examples of scientific achievement, The former Secretary of the Navy, Richard Danzig, personally recognized two senior Navy researchers and awarded them Legion of Merit Medals. CAPT David Harlan, USPHS (until recently U.S.

Navy), was lauded for his research into new strategies for the treatment of combat injuries. While a Navy researcher, he developed a new therapy to "educate" the immune system to accept a transplanted organ—even mismatched organs. This field of research has demonstrated that new immune therapies can be applied to "programming stem cells" and growing bone marrow stem cells in the laboratory. The therapies under development have obvious multiple use potential for combat casualties and for cancer and genetic disease.

CAPT Stephen Hoffman, MC, USNR, was recognized by former Secretary Danzig for his pioneering work in malaria vaccine development and malaria genomics. He published the first report that DNA vaccines were safe, well tolerated, and elicited an immune response in normal, healthy people. His work could lead to the development of other DNA-based vaccines to battle a host of infectious diseases such as dengue, tuberculosis, and biological warfare threats.

The Navy's OCONUS research laboratories are studying diseases at the very forefront of where our troops could be deployed during future contingencies. These laboratories are staffed with researchers who are developing new diagnostic tests, evaluating prevention and treatment strategies, and monitoring disease threats. One of the many successes from our three overseas labs is the use of new technology, which includes a hospital-based computerized data management, analysis and reporting software system. This technology is in use at our laboratory in Jakarta, Indonesia. This system will identify infectious disease outbreak occurrences over an archipelago consisting of some 17,000 islands inhabited by 230 million people.

Our researchers have designed a prototype computer system and lightweight flight vest that translates digital information from an aircraft's orientation instruments into vibrations so a pilot's sense of touch becomes a continuous spatial orientation cue. This research is especially important since future generation aircraft will have performance parameters that severely challenge human spatial orientation.

Other achievements during this last year include development of hand-held assays to identify biological warfare agents, documentation of the immunogenicity of the first oral campylobacter vaccine and determination of the Norwalk-virus as a major infectious disease threat. Our researchers designed probability-based decompression dive tables for Navy divers, studied the acute effects of exposure to jet fuel vapors and designed a software package that estimates medical supply requirements based on patient flow and level of care.

Conclusion

Navy Medicine has covered a lot of ground over the last year and we face the future with great enthusiasm and hope. The new legislative initiatives, along with the MHS's Optimization plans join to make our Navy Medical Department a progressive organization. I thank you for making the military health care benefit the envy of other medical plans. You have provided our service members, retirees and family members a health benefit that they can be proud of. The new entitlements are not inexpensive and solutions to pay for them must be found. The MHS can no longer be under-resourced for the design of the benefit. We must also have predictable and stable funding levels, which would make planning more effective. Optimization and reengineering efforts can only be successfully implemented if our commanding officers know what resources they have to work with.

I stressed in my statement last year the need for a predictable and stable funding environment, which would allow us to plan and execute programs over the span of a complete year, or perhaps preferably, multiple years. We appreciate the close attention that Congress affords to improving the quality of military medical care and our ability to resource healthcare requirements.

Senator STEVENS. Thank you very much. General Carlton.

General CARLTON. Yes, sir. Mr. Chairman, Senator Inouye, members of the committee: It is an honor to appear before you again and I look forward to addressing the issues that are affecting our Air Force Medical Service today. You have my complete statement and I would ask that it be entered into the record.

Senator STEVENS. Yes, sir. All of your statements will be entered in the record.

TRICARE BENEFITS

General CARLTON. Wonderful.

2000 was an incredible year for us and 2001 is shaping up to be equally exciting. First, I have got to congratulate and thank the Congress for doing what we needed to do, and that was accomplishing the daunting feat of establishing TRICARE for Life. We are delighted that we can now restore the full benefit to our older retirees, our family members, if you will, and hope to bring as many of them back into our direct care system as our facilities allow. They have truly earned the right to this health care.

MAIL ORDER PHARMACY PROGRAM

By the same token, the expansion of the mail order pharmacy program in April is a true triumph for our military families and we are eagerly preparing for its successful implementation. These are just two areas that the Congress has directly helped the military families, both older and younger, and I am convinced they will make a huge difference in our people's lives.

I will be frank in saying that we are challenged by the many competing fiscal requirements, to include these new benefits. Like our sister services, we are working hard with the Office of the Secretary of Defense (OSD) and our line leadership to identify critical funding to make them succeed while maintaining the viability of our existing programs. To the best of our knowledge, we believe the $1.4 billion number is correct, in direct response to Senator Domenici's question.

We must also address recapitalizing our direct care system. Investing in our facilities and infrastructure is critical if we are to provide the health care benefits that our beneficiaries have earned, especially the TRICARE for Life. It will be a large bill to pay, but we must recapitalize if we are to be competitive today and into the future.

The Air Force Medical Service has accomplished a great deal this year improving services for our patients at the grassroots level. Each of our facilities is now fully invested in the implementation of our primary care optimization plan. We are seeing real successes, especially within the primary care optimization teams and between their patients. Our patients are happy with our more personal approach and our teams are excited to provide this personal level of care.

JOINT INITIATIVES WITH THE DEPARTMENT OF VETERANS AFFAIRS

Our primary care optimization efforts have been recognized as creating a cultural change based on efficient, effective, quality health care. In fact, many of our initiatives have been adopted by OSD for use across the military system. In this same way, we continue to expand our initiatives with the Department of Veterans Affairs to offer better services for our patients while being responsible stewards of the taxpayers' dollar.

We now have four successful joint ventures, the newest one at Travis Air Force Base began in December with the opening of a new Veterans Affairs (VA) clinic on site outside the hospital at Travis. We are also very proud of our contracting partnership with the VA, established by our Air Force Logistics Office at Fort Detrick, which is saving us millions of dollars.

Our activities in the readiness arena are equally exciting. We continue to refine our light, mobile, and modular deployable forces. Our smallest response package, or SPEARR team, the Small Portable Expeditionary Aeromedical Rapid Response, is a ten-person team deployable within 2 hours in a 1-pallet-equivalent small trailer. This team offers a broad scope of care from public health to emergency surgery and critical care. Air Force SPEARR teams accompanied the President last year on each of his trips to India, Nigeria, and Vietnam.

Other Air Force Medical Service efforts to improve medical response include the establishment last July of our Developmental Center for Operational Medicine in San Antonio. It is the Air Force source to conduct rapid prototyping and solve the complex issues in operational medicine. This center worked with the Texas National Guard in early February to conduct a 3-day community bioterrorism exercise in San Antonio called Alamo Alert. The Texas Department of Health, the Army Medical Department (AMEDD) Center and School, and the City of San Antonio were co-sponsors with us. This exercise facilitated our ability to work together in the event of a chem-bio problem. We plan to expand on this type of training scenario in other locations.

GLOBAL EXPEDITIONARY MEDICAL SYSTEM

We are also testing our Global Expeditionary Medical System, or GEMS, which is an exciting state of the art stepping stone to an integrated biohazard surveillance and detection system.

We continue our outreach in humanitarian and civic assistance, both internationally and at home. We have now taught our trauma and disaster systems courses to students in six Central American countries, South Africa, and Turkey. By the end of this year we will have taught disaster courses to 20 percent of the world's nations.

Another example: In October we completed a mission with the Air Force Deployable Optometric Team to provide comprehensive primary eye care to remote underserved Native Alaskan villages. This is win-win. We get valuable training in an austere environment and great Americans get the care that they need.

I am very enthusiastic about many of our initiatives and will limit myself to just one other. That is the work of our Critical Care Air Medical Transport (CCAT) Teams. When the U.S.S. *Cole* was attacked in October, our CCAT concept was truly validated. The teams cared for 11 of the most seriously injured patients, to include two ventilator patients just out of surgery, and delivered them safely from Djibouti to Ramstein Air Base, Germany, 12 hours later. These teams were composed of Army and Air Force team members as a joint team out of Lansdoul Army Medical Center in Germany. I am extremely privileged to lead these exceptional health care professionals.

PREPARED STATEMENT

Finally, let me say that we could not accomplish all that we must without your support, which has been absolutely exceptional.

Thank you very much for that.

[The statement follows:]

PREPARED STATEMENT OF LIEUTENANT GENERAL PAUL K. CARLTON

Mr. Chairman, Senator Inouye and members of the committee, thank you for this opportunity to address the successes and challenges of the Air Force Medical Service. The year 2000 was a banner year for the AFMS. Never have the stakes been so high, yet the rewards so great. We continue to work very hard to be global leaders in health care through our efforts in humanitarian assistance, force health protection, population-based health care and primary care optimization, and have experienced some exciting results. First and foremost, the AFMS believes it is our privilege to serve in the defense of our country and our pleasure to serve our great American patriots in peacetime health care.

As we support the Expeditionary Aerospace Force, we have recognized in this evolutionary time that we must be relevant to our country in every aspect possible. What is our purpose today, and are we fulfilling it in a way no one else could? We desire to step up and meet the crucial needs of our nation with our unique talents and assets. At the same time, we have to be aware of the stiff competition for limited resources. Our cost must be reasonable so that we may be responsible stewards of the taxpayers' money. How can we optimize our resources to be truly effective? These are the concepts that guide our decision-making on a daily basis.

Air Force Medical Readiness in the Expeditionary Era

As the Cold War military scenarios fade from our memory, and dozens of small-scale contingencies around the world challenge deployed military medics, the Air Force Medical Service has redesigned its medical readiness philosophy to meet the new readiness challenges of a changing world. We recognize that we must be able to engage the full spectrum of operations. To accomplish this, we must ask ourselves, "What are the diverse missions faced by military medics to support these operations?" "What are our readiness roles in these uncertain times?"

We view the medical readiness mission as three-fold: humanitarian and civic assistance (HCA), medical response to disasters, and support of traditional wartime operations. These three missions complement the DOD vision of a force that can "Shape, Respond, and Prepare." For example, HCA missions can shape the environment of our allies to promote democracy, peaceful relationships, and economic vitality—"preventive medicine" against war. By responding promptly and appropriately to disasters, we enhance the value of our partnership with our allies. Both HCA and disaster response missions can create capability and provide lessons to deployed personnel that could be used in wartime operations, thus preparing for our traditional readiness mission, too.

The threats faced by military medics in the post-Cold War era are diverse and frightening. Weapons of mass destruction (nuclear, biological, chemical), natural disasters (flood/hurricane, drought/famine, tornado/earthquake), technological (information management, industrial, toxins), and complex political/natural crises are among the scenarios that might involve military medical personnel. These missions could be overseas or just outside a stateside military base. Senior government officials and taxpayers may expect military medics to bring expertise and the proper gear in rapid fashion to situations involving any of these threats.

Responding appropriately and rapidly means enhancing a core competency for DOD medics. Efficient use of airlift for rapid response means paying careful attention to the weight and volume of gear. Rapid response is often a key to mission success. A large, inflexible response may be delayed by transportation limitations, resulting in needless loss of life and limb at the site of the contingency.

The AFMS has proposed a series of solutions: light, lean, mobile ("small footprint") medical teams; a modular "tiered and tailored" response, custom-built for each mission; rapid insertion of innovative technology concepts into deployment packages; and strategic partnerships with other federal agencies, our Total Force colleagues, and the military medical personnel of allied nations.

"Small footprint" teams take full advantage of the revolution in medical electronic equipment. Capability that was formerly too large to move is now carried in one hand. Patient monitoring that was confined to an intensive care unit can now be done in field conditions. From these improvements and careful logistics, a small team with backpacks can provide impressive medical care quickly in any corner of the world. Limiting the weight of the packs to 70 pounds allows them to travel as normal luggage on a commercial airliner, if military airlift is not available.

Modularity is another key to an appropriate medical response to modern threats. By creating small, multi-functional teams, the medical service can provide the on-scene commander with a flexible response, tailored for the specific contingency. These "Medical Building Blocks" permit problem-specific treatment, just as the various blood components of today offer flexibility over the traditional whole blood

treatments of World War II era. With increased efficacy, small portable medical teams extend limited resources and maximize options for commanders. It is no longer necessary to task eight C–130's to haul an air transportable hospital when a five-person, backpack-portable, surgical team can provide the needed care. After hurricanes or floods, for example, the greatest need may be for public health and preventive medicine assessment. Deploying a two-person aerospace medicine/public health team or several such teams may be the ideal response. The first "tier" is usually the local response, followed by additional "tiers" of teams as needed. With modular teams, this type of individualized tasking can be done efficiently and effectively.

There are a number of new USAF medical teams that are useful tools in meeting our new readiness missions. The disaster response "force package" is called the SPEARR, or the Small Portable Expeditionary Aeromedical Rapid Response team. Deployable within 2 hours, this 10-person team travels with a small trailer (one pallet-equivalent) that is "sling-loadable" (e.g., can be transported from different locations via a sling from a helicopter). It can thus be pulled by a standard pickup truck or airlifted by helicopter, and does not require a forklift for utilization. The team has a broad scope of care: initial disaster medical assessment, public health/preventive medicine, emergency/flight/primary care medicine, emergency surgery (general and orthopedic), critical care, patient transport preparation, along with intrinsic communication capability for aeromedical coordination, consultation, or re-supply. This team has completed its development process, including successful field validation tests in San Antonio and in Alaska. In fact, a USAF SPEARR team accompanied the President to India in March, Nigeria in August, and Vietnam in November.

To further prepare for disaster response, we established the Air Force Development Center for Operational Medicine in July in San Antonio, Texas. The center is the single source for Air Force satellites to conduct medical research, education and training for all levels of disaster response. It was designed to help DOD identify what resources are available by transitioning emerging technology from concept to implementation.

In early February, the DCOM conducted a three-day community bioterrorism exercise, called Alamo Alert, in San Antonio, Texas, in conjunction with the Texas National Guard, the Texas Department of Health and the city of San Antonio. In this tabletop exercise, Alamo Alert explored city, county, state and federal responses to a contagious biological agent. Wilford Hall and Brooke Army Medical Center were among the local medical response forces. Our goal was to help merge the plans of all the different agencies, facilitating their ability to work together in the event of a real terrorist attack. We want our personnel to understand that force protection must go beyond the gates of the base, and we want Americans to understand—and be prepared for—the very real nature of a bioterrorism threat.

In September, we completed the fielding of our Chemically Hardened Air Transportable Hospitals (CHATHs). The CHATH represents the culmination of a joint effort of approximately 10 years to provide collective protection capability for patients treated in the field in a chemical warfare environment. As we convert our ATH assets to the new Expeditionary Medical Support/Air Force Theater Hospital (EMEDS/AFTH) program, we are pursuing development and testing of a new chemical protection capability for our EMEDS, using existing CHATH assets.

Another new tool for appropriate medical response is the International Health Specialist (IHS) occupational track. These medics, hand-picked from all corps for their language, cultural, and regional expertise, will be interwoven with medical readiness planning offices and platforms throughout the U.S. Air Force. The first group of 20 is being assigned to their new duties, and the cadre is expected to grow for several years. Most selected officers and enlisted personnel will need additional training to assume their responsibilities, while others will already have the required skill set to function effectively as regional medical experts. These international health specialists could be called upon to act as advisors, advanced on-site (advon) team members, or to facilitate HCA or other missions into the region of their expertise. IHS personnel will maintain and provide regional medical expertise throughout their careers. This rating may be a key credential for a successful USAF medical career in future years.

State-of-the-Art Expeditionary Technology

Rapid deployment of appropriate technology is another important factor in optimizing medical readiness. Military medics must take full advantage of the revolution in equipment, computers, monitoring gear, and other advances. Surveillance for biological pathogens or chemical toxins should be state-of-the-art in DOD medical packages. The AFMS is pursuing this goal through our Global Expeditionary Med-

ical System (GEMS). This system is in the testing phase now. It is a stepping stone to an integrated biohazard surveillance and detection system that will keep a global watch over our forces. GEMS incorporates an electronic medical record as a basis for real-time data analysis and back up agent identification with DNA fingerprinting and automated results reporting, and will serve as the foundation for an Air Force wide integrated surveillance and medical command and control (C^2) network.

Through GEMS, data collection, assessment, and trend analysis is automatically performed at the operational (unit), tactical (base), and strategic (U.S.-based centers of excellence) levels. Individual specific analysis will provide quick patient diagnosis through the use of DNA fingerprinting technologies. We hope, with ongoing site and regional data review, population-specific analysis will pick up disease trends to provide an early warning of outbreaks or potential biological attacks. Technology is key with portable C^2-linked test platforms that aid the field medic in determining the nature and cause of the biological hazard to facilitate mitigation.

The AFMS is also on the cutting edge in the field of telemedicine. For example, as soon as feasible, we will be embarking on a four-year program to convert facilities throughout the Air Force from standard film-based radiography to computed radiography. Outside of live VTC teleconsultation, digital imaging and teleradiology is the most resource intensive area in terms of computer storage capacity and telecommunication needs such as bandwidth. So, we're very concerned about setting up a communications infrastructure and Patient Archiving and Communications System (PACS) in the most effective way. Working with key industry members will facilitate our success. Complicating how we currently do business is the fact that the AFMS anticipates losing more than 50 percent of our radiologists during the next three years because of competition with the civilian job market.

While teleradiology is not a panacea, it will reduce costs by reducing the need to buy and store films, eliminate silver reclamation, and also reduce by about 25 percent the need to send radiographs to outsourced civilian radiologists for interpretation. We believe that such a system, implemented ultimately throughout the DOD and other federal agencies, can be cost-effective in the long run—one preliminary analysis shows the break-even point at around seven years. Equally important is that this system will significantly reduce turn-around time between the time of interpretation by a radiologist and posting of the report in the patient's record at the originating medical facility.

At this time, we have computerized radiography systems in operation at several of our larger facilities and have established connectivity between Robins AFB, Georgia, and Wright-Patterson AFB, Ohio, between systems from different vendors. At Prince Sultan Air Base in Saudi Arabia, we are installing teleradiology equipment and hope to have the system online and linked with Wilford Hall Medical Center, San Antonio, within the next few months. This would reduce the turn-around time for radiograph reports from seven to 10 days down to one to two days and help one of our more remote bases. In addition, we are planning for the teleradiology demonstration project based at David Grant Medical Center, Travis AFB, California, in conjunction with several outlying medical facilities of the Army, Navy, Coast Guard and Department of Veterans Affairs.

Voice recognition is another fertile area for a rapid return on investment. At Wright-Patterson AFB, two of our radiologists have adapted a commercial off-the-shelf (COTS) voice recognition software package to allow direct transcribing of radiology reports. A recent evaluation showed that this specialized system is saving approximately $1,500 per month per radiologist in transcription costs! We're looking at this project for possible expansion throughout the AFMS.

Teledermatology is another maturing area. In TRICARE Region 10 (Northern California), we use a COTS software package over a virtual private network connected via the Internet between David Grant Medical Center and several military medical facilities in Northern California. A business case analysis showed a return on investment in as little as two months in heavily used outlying clinics. At Elmendorf and Eielson AFBs in Alaska, we have been part of a teledermatology project with the Alaska Federal Care partnership. In several other TRICARE regions, we, along with our Army and Navy brethren, utilize a teledermatology module developed at Walter Reed Army Medical Center, Washington, D.C. As part of that same initiative, within the D.C. area we provide dermatologists for making teleconsultations on a rotating basis.

Curiously, we are finding that the use of some teledermatology systems is decreasing over time. While this may seem to indicate that they may have only a novelty factor that quickly subsides, what we've discovered is that the primary care providers are remembering their teledermatology cases better and learning from them, resulting in a lesser need for referrals.

Finally, we are working closely with the other Services, academia and the commercial world to agree on standards for telemedicine technology applications and are evaluating lightweight, portable peripheral devices such as lung spirometry analyzers, EKGs and ultrasound probes that can attach to laptop, or even smaller, computers in a "plug and play" mode. These, in conjunction with the development of computerized medical records and improvements in medical information, patient decision support and patient tracking systems and telecommunications, are rapidly increasing our capability to provide medical care of the highest quality to our deployed airmen in even the most remote locations. One of our biggest tasks is integrating these different facets of innovative technology to work seamlessly. As we in the military continue to move toward a lighter, leaner posture, this will become increasingly important.

Partnering

Other issues are also critical in our expeditionary medical response. For example, how can we partner with our colleagues in the Guard and Reserve to create a seamless, well-trained and equipped force? We're doing this successfully with our Mirror Force initiative, at all levels, from the policy-making level to the grassroots of the unit level. I am proud to say that the AFMS has integrated the Air Reserve Component in daily headquarters decisions as never before. We have actively recruited 40 Individual Mobilization Augmentee reservists and attached them to the Surgeon General's Office. These reservists are involved in every aspect of daily operations, providing Reserve input to our deliberations while broadening the perspectives of our full time staff members. This year, at my invitation, the Air National Guard and Air Force Reserve each provided one general officer to work directly with me on developing medical responses to WMD. This will assure AFMS actions are fully coordinated and built from the ground up with Guard and Reserve input.

Our medical reserve component personnel have proven themselves to be highly dedicated and competent—capable of any tasking in support of contingency operations or humanitarian and civic assistance missions. In fact, in January alone, a total of 681 personnel from the Guard and Reserve deployed to Macedonia, Saudi Arabia, Oman, Honduras, Peru, Ecuador, Germany, and Japan, plus various locations within the United States, in support of AFMS operations and exercises.

In addition, both Guard and Reserve physicians, in their civilian location of employment, provide needed sustainment training for active duty surgeons and trauma specialists through affiliation agreements with civilian hospitals in St. Louis and Cincinnati. Our medical personnel receive invaluable trauma training in these civilian facilities due to the volume and variety of cases; something we only experience in our military hospitals on a limited basis.

Finally, the reserve component continues to provide more than 85 percent of our total aeromedical evacuation capability and has always performed this responsibility in an absolutely superior manner. In short, as with our line counterparts, the AFMS could not go to war without the Guard and Reserve.

How can we create a similar partnership with our coalition nation military medical colleagues? One way is through sharing the new readiness skills and roles used in the active force. For example, U.S. Air Force medics have taught a trauma systems course, sponsored by the Expanded International Military Education and Training system, to approximately 390 students in six Central American countries, South Africa, and Turkey. In each course, military medics from adjacent countries have attended. Emphasis is on regional involvement, disaster response, trauma care, leadership, civilian-military collaboration, resource management, and "Train-the Trainers" skills.

In El Salvador, host nation graduates of the first course, held last year, taught more than 100 colleagues and completely redesigned the Emergency Department of their Central Military Hospital to more efficiently handle trauma patients. They briefed a contingent of senior medical officers from neighboring countries on their successes at the second course, held recently in San Salvador. The U.S. ambassador from El Salvador wrote me letters of thanks after both courses. Clearly—and I emphasize this critical point—this type of partnership and training can benefit our allies and create regional political stability and economic prosperity, reducing the likelihood of future conflict.

Military medics have become the "Tip of the Spear" in recent years. A USAF HCA deployment in Nicaragua in June l996 was the first U.S. military presence in that country in 17 years. Two more HCA teams followed in the subsequent two years. When recovery efforts for Hurricane Mitch were being assembled, the Nicaraguans reported that the military medical teams had created a climate of trust, and that U.S. military civil engineering teams were welcome to help. Without the HCA mis-

sions, this new relationship would not exist and the needed assistance would not have been requested.

In another example, Air Force optometrists completed an inaugural mission in October to several underserved Alaskan villages in the state's northwest arctic borough region. The only way in or out of the villages is by airplane. The trip was the result of an interagency agreement between the Alaska Native Area Health Service, the Maniilaq Association and the U.S. Air Force. The agreement, signed in August, established a continuing mission to provide primary eye care to remote, underserved Native-Alaskan villages in the region, offering an opportunity to both help an underserved population and exercise the Air Force's Deployable Optometric Team in an austere environment. The team is a lightweight, self-contained, and highly mobile contingent of one to three members who provide comprehensive primary eye care in a variety of austere field conditions—team size can be rapidly expanded if necessary to meet mission requirements. Our team was well received by the Alaskans, providing care to 165 people. More than 90 percent examined needed and were able to obtain prescription glasses. Ten percent were identified and referred for advanced medical care. We look forward to more of these DOT missions, serving those who need us and gaining invaluable experience for future service to our nation.

By the same token, five Air Force dentists deployed on a humanitarian aid mission to the war-torn nation of East Timor in early December in support of United Nations peacekeeping efforts. While deployed, the dental staff performed oral exams and tooth extractions right on the street, or wherever they could find an acceptable place for operating on patients. In those austere conditions, they even had to cold-sterilize their tools with bleach. This experience provided invaluable field training and inestimable personal reward.

As USAF medics seek to fulfill their mission of "Global Engagement", other international partnerships will be needed. At this summer's meeting of the International Committee of Military Medicine, a worldwide organization of senior military medical officials, I proposed an effort to create regional disaster response networks among the membership, and to report models and successes at the next meeting in 2002. There was strong support among developing world member nations, notably by several that have been devastated by disasters in recent years. The national representatives resolved by a 63–0 vote to support our plan, opening a new era of regional and worldwide cooperation between military medical services.

While we are making exciting inroads in our international outreach, the backbone of expeditionary health care remains our aeromedical evacuation system. With our critical care aeromedical transport teams (CCATTs), we provide critical care in-flight. The CCATT mission in response to the apparent terrorist attack on the USS Cole in October was a true validation of the team's purpose. The team cared for 11 of the most seriously injured patients in-flight from Djibouti to Ramstein AB, Germany, including two intensive care patients and some who were just out of surgery. Other sailors traveled on ventilators and suffered from multiple fractures, burns, cuts and bruises. But 12 hours after takeoff, all arrived safely at Ramstein and were transported to nearby Landstuhl medical center.

The experience proved to be a validation of our International Health Specialist program as well. In Djibouti, the location with the required level of trauma skills closest to Yemen, French doctors caring for the critically injured patients were appropriately concerned about letting these patients make the trip to Germany for care. However, two CCATT members, who are IHS participants and speak fluent French, were able to reassure their French colleagues that the wounded would be safe in the hands of the U.S. Air Force medical team. After talking with them and seeing our C–9 aeromedical airlift capabilities, the French doctors were very happy to allow the transfer to take place.

By the same token, we have made headlines with the heroic efforts of our ECMO (Extra Corporeal Membrane Oxygenation) team, the only one of its kind in the world. Most recently, the ECMO team successfully aeromedically evacuated a newborn baby from Okinawa to Wilford Hall Medical Center's neonatal intensive care unit. Her grateful parents credit the Air Force with saving their child's life. This is just one example of our commitment to provide high quality health care to our personnel and their families wherever they are around the globe.

While we are achieving invaluable medical readiness training through our global missions, the AFMS is also expanding our training opportunities on the domestic front by partnering with the civilian health care community. We are looking at a number of civilian facilities where Air Force medical professionals can gain training in trauma and critical skills. We are already partnering with Ben Taub Medical Center in Houston, the Center for Operational and Disaster Medicine at Depaul Medical Center in St. Louis, and are negotiating a partnership with the R.A. Crowley Shock Trauma Center in Baltimore, Maryland. We already have a successful

trauma care agreement in place between Wilford Hall Medical Center and the city of San Antonio, however one center cannot meet all the Air Force's needs for trauma and critical care training of more than 1,400 personnel each year. This training, whether in a military or civilian facility, prepares our surgeons and medical teams to provide leading edge care to our patients at home and around the globe.

In these many ways—through state-of-the-art technology, visionary planning, and creative partnering, among others—medical readiness remains the true core competency of military medics. By utilizing a set of new tools, we can meet our diverse readiness missions and "engage the full spectrum of operations" in the new millennium.

Population Health Improvement

During the past year, the AFMS made significant strides in our efforts to deliver a fit, healthy and ready force, to improve the health status of the people we served and to enhance the effectiveness and efficiency of the health care we deliver. We continue to lead the way in population health improvement.

For example, we have some exciting work ongoing with the DOD Prevention, Safety, and Health Promotion Council (PSHPC), currently chaired by the Air Force. Two of the primary prevention focal areas of the Council include tobacco use reduction and alcohol abuse reduction.

Tobacco use is the single most preventable cause of premature death in the United States, with 435,000 tobacco-related American deaths every year. In the DOD, the cost of direct and indirect care for tobacco is estimated at an annual cost of $900 million. In the Air Force, even healthy (under age 36) smokers' health care costs and work productivity loss is estimated at $107 million annually. These costs are roughly equivalent to all the personnel assigned to an Air Force base the size of Whiteman AFB, Missouri. One base, up in smoke every year!

The Alcohol Abuse/Tobacco Use Reduction Committee, a subcommittee of the PSHPC, is actively addressing this significant public health issue. Partnering with civilian researchers, a $2.3 million grant proposal was funded to conduct a DOD-wide study identifying the optimum DOD tobacco cessation program. This four-year project began in October and is designed to include 16 military installations across all four services and to develop a model for installation-level tobacco reduction efforts.

While DOD tobacco use, for the first time, is below a comparable civilian sample, our goal is to meet or exceed the new Centers for Disease Control Healthy People 2010 goal of reducing the percentage of smokers to 12 percent. This will be no small challenge, but we hope the initiatives in our tobacco use reduction plan will help us reach this goal—and in fact, the plan is currently on schedule. The plan not only targets prevention efforts for tobacco use, it also includes initiatives designed to improve access to treatment. Specifically, we need to improve access for our beneficiaries to combined behavior and pharmacological therapies that have proven effective. Thanks to our resale partners, we are addressing the issue of availability and accessibility not only of tobacco, but also of tobacco cessation products in our commissaries and exchanges.

Finally, leadership support is a requirement for success of this initiative. The impact that instructor personnel have on young airmen, sailors, marines and soldiers as role models during military training and education cannot be overstated. They must set the example both by not smoking in front of our young men and women and by sending a clear message that tobacco use is not consistent with a fit, healthy and ready force.

The PSHPC's alcohol abuse reduction team has also had a very successful year. Our plan targets four specific areas: (1) improved surveillance; (2) focused education and training; (3) identification of high-risk groups; and (4) assessment and development of best practice methodologies. I am pleased to report we are on track in all areas. We have been able to add alcohol-related questions to an already existing DOD customer satisfaction survey, enabling us to assess the prevalence of heavy drinking in our TRICARE beneficiaries. We have also conducted a thorough analysis of our service-specific unit leader prevention programs.

The prevention of heavy drinking requires effective educational efforts and, in some cases, a cultural change. The shift toward population-based health care with an emphasis on force health protection is crucial to our efforts. The responsible use of alcohol needs to be conveyed from the top down. We can no longer afford the $600 million estimated DOD annual cost from heavy drinking.

At the Air Force level, the concept of building a healthy community involves more than just medical interventions. It also includes local environmental quality and hazards; quality of housing, education and transportation; spiritual, cultural and recreational opportunities; social support services; diversity and stability of employ-

ment opportunities; and effective local government. Impacting these elements requires long-term, dedicated planning and cooperation between local Air Force commanders and civilian community leaders. The creation of the Air Force Community Action Information Board (CAIB) this year brought a number of senior functional area representatives from across the Air Force enterprise together to focus on community problems. The CAIB now provides senior level oversight for the Integrated Delivery System (IDS) that provides preventive services at the base, major command, and Air Force level.

The first product of our IDS is the Air Force Suicide Prevention Program, started in the summer of 1996, which has been very successful at reducing the rates of suicide in the Air Force. Although even one suicide is too many, the significant reduction in human lives lost to suicide is a model for community-wide approaches.

A key tool for our program is the Suicide Event Surveillance System (SESS), a web-based information management application that provides secure, real-time data to all operational levels of the AFMS as well as participating partners within the Air Force and DOD. The development of SESS provides a real-time centralized data repository of all suicides and non-fatal self-injurious events (NFSE). This includes demographic variables, event characteristics (date, time, method used, substances used), and risk factors (marital, financial, legal, and other problems). E-mail notification is automatically generated from the input source to the Force Health Protection and Surveillance Branch, notifying users a new case has been generated.

This meticulous approach to program management, complemented by outstanding customer teaming and leadership, produced a high quality product. Most important, a major new weapon is available in the force health protection arsenal, resulting in an enhanced ability to meet mission needs across the Air Force. The fact that the Centers for Disease Control and Prevention have expressed an interest in SESS for nationwide use testifies to its success.

Primary Care Optimization

Another way we are in the vanguard of population health improvement is through our primary care optimization (PCO) initiative, where we've been working diligently to reengineer our primary care services. This initiative is critical since more than 80 percent of all the care we deliver in the AFMS is through our primary care clinics. Our Air Force medical professionals in Europe paved the way with a highly successful training program to optimize primary care within U.S. Air Forces, Europe. We enhanced this program and adapted it for AFMS-wide primary care optimization training. The result was our initial "Quickstart" training of some 800 personnel, including two primary care teams (provider, nurses and technicians) from each of our medical facilities, as well as representatives from our major commands (MAJCOMs).

The Population Health Support Division (PHSD) and MAJCOMs are now providing follow-on support to sustain, refine and monitor implementation efforts. We've also fielded formal policy, developed a comprehensive PCO guide and implemented a course in population health epidemiology to facilitate this initiative. Each medical facility is fully vested in developing and implementing its PCO plan to ensure: (1) Each enrolled patient knows his/her provider primary care team; (2) Each primary care team knows the health care needs of their patients; (3) Each primary care team provides evidence-based care; and (4) Focus is on established performance measures.

To achieve these desired goals, our facilities are aggressively implementing primary care manager (PCM) by name assignment. Knowing which patients are assigned to which PCM, allows the PHSD to provide demographics, preventive service needs, chronic disease burden, and other essential information to PCMs for their use in designing individual plans of care for each of their enrollees.

Through PCO, we've gained efficiencies in health care delivery by restructuring our clinics, reassigning support staff to our PCMs, and providing additional training to improve the skills of our enlisted and nursing personnel. We're improving the effectiveness of our care by adopting the U.S. Preventive Services Task Force recommendations for clinical preventive services, the DOD/VA clinical practice guidelines for disease/condition management and other evidence-based clinical practices. PCO also requires that we measure ourselves against nationally recognized standards for childhood immunizations, breast and cervical cancer screening, and prenatal care in the first trimester. And finally, because our primary mission is to provide a fit, healthy and ready force, we've developed the capability to measure and facilitate individual medical readiness as mandated by the Joint Chiefs of Staff.

Through all of these efforts, we are steadily transitioning the AFMS from a system of reactive sickness-based care to one of proactive, prevention-oriented health care delivery. We are seeing real success, especially within the PCO teams and between the teams and their patients. The relationships are one of trust and under-

standing that are reminiscent of the one-on-one care that we had from our hometown doctors and their office staff. Our nurses, medical technicians, and health service managers are now so much a part of the team and the delivery of health care that many patients see them as their "Doc." It's exciting for everyone involved.

Our optimization efforts have not gone unnoticed. A tri-service team of functional experts, lead by the Department of Defense Comptroller's Office, recently recognized the AFMS for the strides we made in creating a cultural change thriving on efficient, quality health care. In fact, many of our programs have been adopted for implementation across the Military Health System. We are very proud of this recognition, but we know our efforts to date are only the beginning of what we can accomplish.

Optimization demands a relevant performance metric and measurement system. The AFMS strengthened its performance metrics last summer. The focus was on primary care—a key driver to any managed care program—and the trends are positive. We used these results to not only identify areas for improvement with respect to enrollment, provider productivity and staffing, but to also prove the effectiveness of the many optimization initiatives deployed to date. It's not surprising that, given the success of this initiative, the tri-service performance metrics subsequently introduced by OASD (Health Affairs) are almost a mirror image of the AFMS metrics.

The AFMS is also working closely with OASD (Health Affairs), the surgeons general of the Army and Navy, and senior leadership from all three military departments, under the guidance of the Defense Medical Oversight Committee. This combined effort is focused on studying various alternatives leading to an organized, appropriately resourced military health system meeting the health care requirements for today and the future.

Keeping the "Promise"

Fiscal year 2000 was the year of military health, with more than 50 initiatives pending in congressional legislation, and culminating in the military medical legislation contained in the Fiscal Year 2001 National Defense Authorization Act. The Air Force joins our sister Services in gratitude to Congress for helping us to meet our commitment to our airmen, retirees and their family members.

We are especially pleased at the success of congressional efforts to make TRICARE for Life a reality, restoring the full benefit to our older retirees, and we hope to provide as many of them as possible the quality health care they so richly deserve.

We are also delighted with other provisions of the National Defense Authorization Act, such as the expansion of TRICARE Prime Remote to include family members, the expansion of the National Mail Order Pharmacy to all beneficiaries, the elimination of copayments for active duty family members enrolled in TRICARE Prime, and a permanent chiropractic benefit for active duty members, among other provisions.

While these exciting changes were evolving, we in the AFMS were busy improving our services at the grassroots level. For example, we are proud of our customer service improvements in beneficiary assistance and claims processing. We now have Beneficiary Counseling and Assistance Coordinators at every Lead Agent and medical treatment facility (MTF). Our goal is to have them serve as the beneficiary advocate and problem-solver, interfacing with the MTF staff, managed care support contractors, and claims processors. Additionally, to prevent claims problems before they occur, we simplified our process and can now tout a claims processing turnaround time of 96.5 percent within 30 days and submission rate by providers of 97 percent—removing beneficiaries as the middlemen.

If we fail to properly process a claim, beneficiaries no longer have to face the stress of resolving TRICARE-related debt by themselves. A new DOD program established a Debt Collection Assistance Officer at every Lead Agent and MTF to address notices or negative credit reports due to unpaid TRICARE bills. With this single point of contact, we will be able to identify how extensive the collection problem is for our Air Force families and take all measures necessary to resolve collection matters.

Another way the AFMS is proactively reaching out to its beneficiaries is through our new Waiting Room Network (WRN). Recently, the Air Force entered into a mutual agreement with a civilian company to provide our stateside MTFs with a healthy lifestyle network specifically designed for patients. This top quality commercial product is being featured nationwide, with more than 20 million patient views per month. In our MTFs, the WRN will allow us to make the best use of the time our patients spend waiting for prescriptions and appointments, time often wasted reading old magazines and watching daytime television.

Busy providers will find that basic health care information, often time-consuming to share effectively, and other educational programs can be offered to patients via the WRN. What a great way to achieve our goal of educating and empowering our military families to make the best individual decisions about their life-styles and health care choices—especially when they are a captive audience in the waiting room! In the future, we hope to access the network for a small amount of time each hour to pass along important information to our beneficiaries on AFMS and TRICARE issues.

On Jan. 12, an agreement package was mailed out to each of our stateside MTFs encouraging them to move quickly on deploying these systems in the high volume waiting areas in each facility. We anticipate the full network will be operational across our targeted facilities by the summer. Added good news is that the AFMS worked hard to make this a DOD contract, making it available to other federal facilities who are interested.

No discussion on patient services would be complete without addressing our partnership with the Department of Veterans Affairs. Since the enactment of the DVA and DOD "Health Resources Sharing and Emergency Act," the Air Force community has strived to identify areas to promote the sharing of resources between the two departments. The Air Force continues to have numerous arrangements with the DVA, and we presently have four successful joint ventures as well. The newest joint venture, at Travis AFB, began in October. David Grant Medical Center at Travis will provide inpatient services, same-day surgery, and outpatient specialty services. Our other three joint ventures continue with great patient satisfaction at Albuquerque, Las Vegas, and Anchorage.

We continue to pursue a number of joint initiatives with the DVA to improve mutual efficiencies. For example, The DVA and DOD are participating in the National Patient Safety Partnership; DOD is in the process of developing a reporting system based on the DVA model. We are also partnering on the development of several new clinical guidelines, such as redeployment health, substance abuse and uncomplicated pregnancy.

An area we in the AFMS are particularly proud of is the VA contracting partnership established by our Air Force Medical Logistics Office at Fort Detrick, Maryland. This program, known as the VA Special Services (VASS), offers a tremendous opportunity to reduce contracting lead times, leverage buying power, and save big dollars in surcharge and procurement costs—and the savings from this program can be redirected to direct patient care. In fact, in fiscal year 2000, the AFMS realized a surcharge savings of more than $1 million and a cost-avoidance (money saved through DVA vs. a different contractor) of $7.75 million. This partnership is exactly that—a partnership—the AFMS provides the infrastructure and the DVA provides the staff. It is a true win/win, also saving money for the DVA as they reduce prices for larger bulk contracts. We are always looking for new ways to partner with our federal colleagues whenever it makes good sense for everybody, especially the taxpayer.

Quality Care, Satisfied Customers

Quality care continues to be the hallmark of the AFMS. With all of our facilities accredited 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 is 97.0 percent (vs. 93.2 percent for the national average), and our hospitals score at an average of 92.3 percent (vs. 90.7 percent for the national average). In addition, we are very proud of the fact that 90 percent of Air Force military physicians who are board-eligible are also board-certified.

We are committed to ensuring the quality of our care remains exceptionally high. For example, Air Force personnel are vital participants in the DOD Patient Safety Working Group to improve health care by reducing medical errors and enhancing patient safety. Nellis AFB Hospital, Las Vegas, Nevada, is a pilot site for the Patient Safety Program. Eglin AFB Hospital, Ft. Walton Beach, Florida, developed a Medical Team Risk Management Training Program that has been adopted as a model for DOD and presented to the American Medical Association, Veteran's Administration, and the 2001 TRICARE Conference. In addition, Air Force Materiel Command has developed an innovative anonymous medical error reporting system, which has provided promising data for risk reduction strategies, and invested in pharmacy robotics for all their facilities. Finally, the Air Force has three teams participating in the Institute for Healthcare Improvement Patient Safety Breakthrough Series. All of these complementary initiatives will facilitate compliance with the Executive Order and National Defense Authorization Act directions to decrease medical errors and improve patient safety.

These are all ways we are striving to put our patients first. And, according to the DOD Customer Satisfaction Survey, our patients feel we are succeeding! The latest results show 80 percent of the 20 top-rated MTFs belong to the Air Force. At the recent TRICARE conference, we also took the Satisfaction Awards in three of the five categories, as well as the Access Awards in three of the five categories. But rest assured, there is still room for improvement, and we will not rest on our laurels.

In conclusion, we look forward to the exciting changes in the delivery of military health care in the coming year, but continue to emphasize our desire to be relevant to the health care needs of our military family and reasonable as we address associated funding requirements. We appreciate this committee's outstanding support in these areas.

While it is truly our privilege to serve this great nation and our pleasure to serve our patriots and their families in peacetime, let me be clear that the two cannot be separated. The success of our medical readiness in wartime or disaster will be the direct result of our vigilance and commitment to excellence in the duties we perform in our daily peacetime roles. There is still much work to be done.

Senator STEVENS. Thank you.

General Peake.

General PEAKE. Chairman Stevens, Mr. Inouye, distinguished Senators: We have had an Army Medical Department since July of 1975. It is a rich heritage and I feel truly honored to be here as the fortieth Surgeon General of the Army. It is an exciting time to get this job: a new century, breakthroughs in medicine in things like genomics and information management and technology in general that allow us really to know more about our patients than we have ever known before; interesting in terms of the threats around the world, interesting in terms of the National Defense Authorization Act, which gives us an opportunity to give improved services to our military members and their families and to rebuild the trust with the retirees who have served our Nation so well in the past.

It is an excellent benefit. It is one that we have heard several times today about the importance of adequate and timely funding if we are really going to see the promises of that benefit come to fruition.

It is also important to recognize that we too have a responsibility here in terms of making sure that we get the best value out of this precious taxpayer dollar. We must and we will get better at writing and managing our contracts. We must and we will continue to optimize this direct care system of ours.

MISSION

While it is important, it is not only for the peacetime care that it is important. Our mission is much larger than just peacetime care. In fact, it gives us the opportunity to increase the robustness of our direct care system, to give the satisfaction and quality of practice that comes from practicing across the full spectrum of the age group of patients that we are going to see in this, of having excellence in our training programs that train not only doctors, but nurses and our corpsmen as well and our medical technicians and so forth. We need that population to be able to have those kinds of training programs.

Further, it really establishes a sustaining base that allows us to do all these other things, sending, deploying this quality worldwide whenever the Nation needs it, wherever we need to support our troops. It is things like Kosovo and Bosnia and Kuwait and Honduras and Sinai and on and on where we have our folks today. It is Arctic care that is going on today, where we are dealing with ten

outlying villages in the inner part of Alaska. So it is more than just peacetime health care that we are really talking about. It is appreciated and it is needed.

If I could, I would like to read just three pieces of correspondence, excerpts, that have come across my desk recently. One is from——

Senator STEVENS. Could you pull that mike a little bit closer, General.

General PEAKE. Yes, sir.

One is from a sailor from the U.S.S. *Cole* who is relating his experience coming through Landstuhl, Germany, our Army Medical Center that is jointly staffed with the Air Force, by the way. It says: "Although the flight from Yemen was long and arduous at times, you could see it in the eyes of your personnel and we felt it in our hearts that we were safe and in good hands. For me personally, it was like being dropped in the arms of angels. Those who initially cared for me in the early hours of October 12th for all practical purposes allowed myself and my family here in Jacksonville to celebrate the joy of life once again."

The next is from an Army parent, someone, actually a career officer who has now been selected for command, who wrote it on the back of a critique sheet: "If you ever need a family to speak about the Army medical system, please call me or my wife. My daughter had cancer at age 6. She is now 14. The radiation caused a deterioration of her eyesight. We knew this would happen. She is now 20–25 because of your eye doctors. There is no way to put a cost on the care and concern your doctors have given to our family. Doctors like Mary O'Hara are truly angels."

Finally, a note from a captain recruiter, a female officer who was trying to find obstetrics care. Our recruiters, you know, we put out in various places away from military treatment facilities so they can build the force. So she is a member of TRICARE Prime Remote, which is, fortunately, with National Defense Authorization Act (NDAA) now expanded to active duty family members. But she says she was having some trouble finding an obstetrical provider:

"I have spoken with Mrs. Pat Margola at the Military Medical Support Office—that is an assistance office—and she has resolved the issue. I cannot thank you enough for taking care of soldiers. It really meant a lot to me, my family, and, believe it or not, my soldiers as well. We have all regained faith in the system and in the chain of command."

PREPARED STATEMENT

This is military medicine across the spectrum and why it is important, just as you said, Senator Inouye. As General Shinseki said, it is all about people and quality and trust. I am proud to be a part of it and I really appreciate a chance to be here today with you.

Thank you.

[The statement follows:]

PREPARED STATEMENT OF LIEUTENANT GENERAL JAMES B. PEAKE

Mr. Chairman and Members of the Committee, I am Lieutenant General James B. Peake. I thank you for this opportunity to appear before your Committee. It is my privilege to serve as the fortieth Army Surgeon General.

This morning I would like to discuss the opportunities and challenges that face the Army Medical Department. I will frame this discussion in terms of the three fundamental components of our mission; Projecting a Healthy and Medically Protected Force; Deploying a Trained and Equipped Medical Force; and Managing the Health of the Soldier and the Military Family.

As we look to the future, The Army Medical Department is in synchrony with the Army Vision articulated by General Shinseki and we are linked to the Transformation that will keep the Army relevant in the 21st Century. His focus on People puts Army Medicine squarely in the middle of our Army's Well Being Campaign, both as we promote the health and provide the care for the force, but also in how we attract the best for the Army Medical Department keeping the focus on the quality that is a fundamental requisite. Initiatives that I will discuss tie directly to the need to recapitalize the legacy force; leverage current day technology to build the interim force, and to get the right axis on research, science and technology to develop the objective force of the future. The tenets of Army Transformation—agility, versatility, and responsiveness—resonate throughout the Army Medical Department today.

A HEALTHY, FIT, AND MEDICALLY PROTECTED FORCE

This simple statement understates the extent of what must be done to be successful in this mission. Health is the absence of disease and disability. It is not only the routine endemic diseases for which we have a plethora of vaccines, but the uniquely military challenges such as Adenovirus and the vaccine shortfall that we now have because there is no commercial market. It is the Mental Health of our soldiers who may be away from home for the first time, under physical and mental stress either in training or on deployment. Health in relative terms includes the mitigation of injury in a manner that is tied to fitness for the mission. It is more than vaccines. It is education. It is surveillance for patterns of illness and of the environment. It is policy and procedures that all must be based on legitimate science. It is all of these complementing one another to provide healthy and fit forces.

Among the lessons learned by military medicine from the Persian Gulf War is the importance of Force Health Protection and the need for attention to it before, during, and after the deployment. It is the leverage of information and information systems that will allow us to take this core competency of Military Medicine and make major advances. Ultimately, a longitudinal and queriable patient record will facilitate this proactive approach. The Personal Information Carrier (PIC) in the Army and the links to the Composite Health Care System II that we will soon be fielding is the right axis of advance. The link between the medical team in Bosnia and the redeployment site for the 49th National Guard Division at FT Hood, Texas, was an example of how flow of medical information could improve the processing of soldiers, insure that they have the right kinds of follow-up and access to the medical care they deserve, and there is a data base that can support the process.

We are doing some fundamental reorientation of Military Medicine to emphasize proactive preventive services and the research to make changes based upon science. At Fort Sam Houston, a focused program on trainees entering advanced individual training has resulted in a marked reduction in injuries in two different battalions. Brigadier General Lester Martinez at the Center for Health Promotion and Preventive Medicine has major thrust areas in injury prevention, smoking cessation, women's health issues to name but a few. These efforts on behalf of soldiers and their families will have direct applicability to the civilian sector.

Casualty prevention runs across the life cycle of the soldier. It includes personal protection that runs the range from sun screen-chemical protection combinations, to ankle braces, to vaccines to protect from biological weapons. But, personnel monitoring, environmental monitoring, and comprehensive medical surveillance are key to being proactive, not only to specific incidents, but to developing the Science and Technology questions that must be pursued to get us to the future. Control of environmental and occupational-health hazards must be accomplished in austere battlefield environments with tools and techniques that are strategically deployable. Battlefield environments are quite different than industrial settings. It includes providing safe food and water, and the knowledge and skills to deal effectively with the industrial contaminants of the modern battlefield. Sustaining a service member's

health, in the field or at home station, produces a far better readiness outcome than providing health care after the fact of illness or injury.

The Army is also 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 1.9 million immunizations delivered safely to over 496,587 service members worldwide. 1,439 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.

The Federal Strategic Force Health Protection Initiative has been staffed and synchronized with the Army, Department of Veterans Affairs, and Department of Health and Human Services. This creates a nationwide network of Department of Defense, Veterans Affairs and Federal Occupational Health clinics that 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.

There has been recent and continued interest in the health effects to our armed forces as a result of exposure to depleted uranium. The health effects of depleted uranium have been studied for more than 50 years and, while this metal is slightly radioactive, its primary health effects are from extensive exposure and due to its heavy metal properties. The Army Medical Department has been assessing the health and environmental risks from depleted uranium for decades; most recently in support of Office of the Special Assistant for Gulf War Illness exposure assessments for Gulf War Veterans. The Army Medical Department has historically been the lead in responding to issues concerning depleted uranium. The Army has implemented a training program to inform soldiers about depleted uranium and its effects on health and the environment. Only individuals in, on, or near armored vehicles at the time of penetration by depleted uranium might exceed United States peacetime safety standards for depleted uranium intake.

The health effects of depleted uranium are being assessed by the World Health Organization, and the environmental levels of depleted uranium in the Balkans and the resulting environmental impact are being evaluated by the United Nations Environmental Program. Internationally recognized Army experts have accompanied the field scientific surveys and participated in the data analysis and formulation of the reports. Additional information on depleted uranium is available on http://www.gulflink.osd.mil.

Comprehensive Medical Surveillance entails the aggregation of data from all elements of Force Health Protection to develop a picture of an emerging problem or identify future research priorities or countermeasures to better protect the force.

Personnel monitoring includes programs such as the Department of Defense serum repository, pre- and post-deployment screenings, and accurate record keeping to document all care provided—either on the battlefield or in a fixed facility. Growing automation of medical systems through such efforts as the Computerized Patient Record, the Personal Information Carrier, and Medical Communications for Combat Casualty Care will dramatically increase our ability to maintain exposure and health-care records.

Environmental monitoring entails knowledge of potential health threats in the air, water, and soil to which our service members are exposed. A variety of sensors are under development for both medical and non-medical monitoring of the environment that will allow us to understand and predict the exposures of an individual soldier. Army Preventive Medicine Units are currently assessing the occupational and environmental health risks to our force in Bosnia, Kosovo, Kuwait and numerous other locations throughout the world.

Thanks to the tremendous efforts of the prevention communities of the Services' Medical Departments, most elements of Force Health Protection are well in place. However, there is still work to be done. Information systems are key enablers. Monitoring of the environmental threat must be automated through the development of the Defense Occupational and Environmental Health Readiness System, and its integration into military deployments through the Theater Medical Information Program and Medical C^4I efforts.

Even as we enter the 21st century, many longstanding health threats sadly remain: alcohol and tobacco abuse, injuries, and old diseases with new faces, like tu-

berculosis and malaria. Clearly the research axis in the Army's transformation is critical as we build the wellness and Force Health Protection into the Objective Force.

Congress has entrusted the United States Army Medical Research and Materiel Command with the management of many congressional special interest research programs that will support this goal. The Medical Research and Materiel Command, commanded by Major General John Parker, ensures the sponsorship of meritorious science that can have great benefit for the Department of Defense. The Department of Defense has received high praise from Congress as well as the science and advocacy communities for the administration of these programs. The science that has come from these efforts has been remarkable.

Since the inception of the Breast Cancer Research Program, 2,290 awards have been made with fiscal years 1992–1999 funds and another 900 awards are anticipated using fiscal years 2000–2001 funds. The research portfolio totals over $1 billion. 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 breast cancer treatment and quality of life, environmental carcinogenesis, angiogenesis, mammographic imaging, training, and infrastructure enhancement. The outcomes of the research supported by this program were reported back to the American public last summer during the very successful Era of Hope meeting. There were 1,018 participants including Breast Cancer Research Program research grant awardees, other renowned scientists, health care providers and clinicians representing the United States Army, Air Force, Navy, and Public Health Service. Over 100 news stories resulted from interviews with local and national news media outlets. Over 20 interviews were broadcast live to local markets across the country. Time magazine (June 26, 2000) published a one-page article on the research funded by the Breast Cancer Research Program. Most recently, the Army's contributions to breast cancer research were highlighted in MAAM magazine (January 2001), entitled "Three's Company: The Army, Women with Cancer and the Medical Community have Joined Forces."

Since the inception of the Prostate Cancer Research Program, 295 awards have been made with fiscal years 1997–1999 funds and another 300 awards are anticipated using fiscal years 2000–2001 funds. The research portfolio totals over $260 million. The Department of Defense Prostate Cancer Research Program is supporting innovative, multidisciplinary research to conquer prostate cancer. While the program is relatively young, the diverse portfolio of funded research is making important contributions to understanding the prevention, detection, diagnosis, and treatment of prostate cancer. The research strategy designed by the Prostate Cancer Research Program is yielding results that are ready for clinical testing and application, thus aiding in the national health effort to impact the well-being of all people.

The United States Army Medical Research and Materiel Command is working in support of national cancer research priorities affecting the health of all Americans. By emphasizing innovation in the administration and conduct of research, major accomplishments in cancer research have been realized.

The Volume AngioCAT Project is a newly conceived medical device that could employ, simultaneously and in real time, several imaging technologies to provide physicians with a new level of anatomic and physiologic data. 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 aggressive new preventive interventions in patients where pathology was "missed" on routine physical examinations, thus maintaining a healthier active duty and retired population. We have the opportunity to study the value of such advances to determine if it offers real benefit or just greater cost. The first prototypes of a Volume AngioCAT will function in fixed facilities; however, the research may lead to the development of units that could function in deployed environments for rapid diagnosis of the injured warfighter.

The Disaster Relief and Emergency Medical Services program is designed to leverage the resources at academic institutions to save lives and reduce costs for injured persons in both the military and civilian sectors. This project consists of three interrelated components that tests interactive telemedicine technologies to treat patients in both urban and rural settings. The diagnostic methods and therapies component will treat patients who are unable to receive advanced care quickly, and develop mechanisms to extend life beyond the "golden hour."

The Center for Integration of Medicine and Innovative Technology last year yielded almost twenty-five cutting edge projects pioneering minimally invasive therapies

in diverse research areas as Cardiovascular Disease, Cancer, Stroke, Trauma, and Critical Care. Eighty-seven publications and reports were published; sixty-five abstracts and presentations were done. The "Enabling Technologies for Medical Simulation" project is developing the underlying technologies essential to develop medical simulation training devices to train combat medical personnel in trauma procedures.

The Combat Trauma Patient Simulation System program is developing a system of digitized mannequins that realistically respond to wound condition and medical treatment interventions as would the human body. It will enhance initial and sustainment training for medical personnel by simulating battlefield injuries by type, interventions and outcomes.

The diabetes project is a coordinated effort in the diagnosis, management, and treatment of diabetes and diabetic retinopathy. A 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. By jointly developing and implementing these research protocols, 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.

The scientific and support staff of the United States Army Medical Research and Materiel Command, under MG John Parker, deserve special recognition for their dedication and accomplishments.

DEPLOY A TRAINED AND EQUIPPED MEDICAL FORCE

General Eric Shinseki describes America's Army as "Soldiers on Point for the Nation—Full Spectrum Dominance—Persuasive in Peace, Invincible in War." Facing the challenges of this new century, he has begun the process of transforming the Army into a force that is responsive, deployable, agile, versatile, lethal, survivable, and sustainable.

Army medicine is integral to the capability and culture of the Army and has undergone significant transformation to maintain its relevance and value to the Army of the 21st Century. We are supporting Army Transformation through the reengineering of the deployable medical force, adoption of the best modern clinical and business practices, and military medical research and development that is focused on the protection of soldiers and care of combat casualties. We have focused upon the training, leader development, and enabling of soldier medics to operate independently and far forward with the highly mobile and dispersed force they will support.

The Medical Reengineering Initiative will reshape our Corps and Theater level medical systems to be more modular, flexible, and strategically deployable to provide the capabilities needed for the full spectrum of military operations. We have also worked hard to reshape our support to division units and below. Additional medical support, with a special emphasis on preventive health services, has been placed closer to the combat soldier. Staying the course on Medical Reengineering Initiative parallels the Army's transformation plan, links directly to the recapitalization of the legacy force, and will facilitate the medical support to Army modernization. It assures the best possible Force Health Protection to the Army's most important asset, its soldiers.

Medics in support enable the soldier to be on point for our nation. In October 2001, soldiers will begin a 16-week training program at the Army Medical Department Center and School to become more skilled and competent medics in the 21st century. The newly created 91W Military Occupational Specialty, Health Care Specialist, will merge today's 91B Military Occupational Specialty, Medical Specialist and 91C Military Occupational Specialty, Practical Nurse and provide additional skills to meet the operational combat health-support needs of the future battlefield. Training will be focused on emergency care, primary care, medical force protection, and evacuation and retrieval. All medics will graduate with National Registry Emergency Medical Technician certification and be required to routinely revalidate their critical medical skills. This major Military Occupational restructuring creates an axis of advance into the 21st century for the combat medic.

Army graduate medical education programs provide the vast majority of our military medical specialists. Our fully accredited programs are among the best in the world. In a recent survey, the majority of our specialties have a 100 percent board pass rate, with the overall pass rate for all specialties at 87 percent. The programs produce a cadre of highly trained and skilled soldier—physicians. Our programs remain among the most effective means of recruiting and retaining quality physicians. In addition to the full breadth of clinical skills, Army graduate medical education

programs are augmented with military unique aspects of a given specialty, which prepares physicians for the rigorous demands of practice in a wartime or contingency environment. After completing graduate medical education, this highly skilled cohort is among the most versatile group of professionals that can be deployed at all levels within the theater of operations to support the medical mission.

The value of integrating military unique curriculum within graduate medical education programs to facilitate force transformation cannot be overstated. When Department of Defense mandated the implementation of the curriculum, there were no resources set aside to support training. However, each specialty program director has taken advantage of operational opportunities as well as formalized activities. Residents receive orientations and lectures concerning war zone injuries, trauma and military deployments. Additionally, they attend formalized training including a centralized combat casualty care course, advanced trauma life support training, medical management of chemical and biological casualties and bushmasters course conducted at the Uniformed Services University of the Health Sciences. Despite funding difficulties, imaginative solutions are used to incorporate military training without compromising training by deploying residents along with staff physicians during actual deployments. Concurrently, residents participate in medical readiness training exercises, spend time assigned as a brigade surgeon and participate in field training exercises where basic combat task training and testing is conducted. Feedback from our residents and staff regarding the aforementioned efforts has been very positive.

Medical evacuation of wounded and injured soldiers from the battlefield has been the Army Medical Department's number-one priority for modernization for several years. Clearing the battlefield serves as a critical enabler for the combat commander, allowing him to concentrate on the prosecution of the mission. Air evacuation is the fastest and most flexible method, and the Army Medical Department has been working with the aviation community to improve the UH–60 Blackhawk and create a state-of-the-art evacuation platform—the UH–60Q. The UH–60Q has an upgraded avionics package that improves situational awareness for the pilots, and a reengineered interior treatment module to facilitate enroute care for patients.

The Army Transformation Strategy requires a capable, recapitalized Legacy Force focused on the Counter Attack Corps. The Armored Medical Evacuation Vehicle is critical to the recapitalization of this Legacy Force, is intended to replace the M113-series evacuation vehicles in the Counter Attack Corps only. The Armored Medical Evacuation Vehicle uses excess M2A0 Bradley Fighting Vehicles, that have the turret removed and the roof squared off and raised 13 inches. This system will provide the medical platoons and forward medical companies with a ground evacuation platform that can keep up with the combat elements they support while providing improved protection and on-board capability and a common platform for maintenance for support.

Another Army Medical Department modernization effort is exploratory work on the next generation of medical shelter systems. This effort is looking at developing a family of rigid and soft-sided containers that will facilitate strategic and tactical mobility while providing an appropriate environment for surgery and intensive care. These shelters will incorporate autonomous power generation and environmental control and be wired for digitization. They will be capable of operating in chemical and biological threat environments. Their multi-functional design will allow for quick reconfiguration for multiple medical applications.

To promote tactical mobility, the Army Medical Department is working with the Transportation Corps to define medical requirements for trucks in the Family of Medium Tactical Vehicles, or FMTV. The FMTV–LHS consists of a truck with a pneumatic load-handling system that will be used to transport current and future deployable medical systems.

A major initiative in support of Army Medical Department Transformation and Army digitization is the Theater Medical Information Program. The Joint Theater Medical Information Program, or TMIP, will let us phase out manual and stovepiped legacy automation systems and replace them with a fully integrated, joint medical information system. This is a critical enabler for Force Health Protection, automating the documentation health care and health surveillance, managing logistics and patient movement, and providing the situational-awareness for medical planners to tailor medical forces and increase their span of control. It will provide a common information environment for all the military medical services that are continuous from the forward-deployed medical elements to the sustaining base in the United States. One Example is the automation of patient tracking through the Transportation Command Regulating and Command and Control Evacuation System (TRAC^{2}ES) is essential for coordinating and synchronizing the movement of military patients throughout the Military Health System in both peacetime and in

war. Transportation Command Regulating and Command and Control Evacuation System will permit casualty tracking throughout the battlefield, and provide in-transit visibility of casualties. At the same time, it will speed the strategic movement of patients to the bed with the right capability to care for them.

The Army will implement the Theater Medical Information Program through the program Medical Communications for Combat Casualty Care. This major acquisition program will build and support the Theater Medical Information Program infrastructure and provide the necessary integration with Service and joint command and control and combat service support systems.

Using new technologies, digitization, and enhanced mobility to achieve a lighter, faster, more responsive medical capability will ensure that military medicine is there to support the deployed service member

MANAGE THE HEALTH OF THE SOLDIER AND THE MILITARY FAMILY

When I speak of "managing care", it can get caught up in the rhetoric of a focus on shareholders rather than our patients. It is the soldier and the soldier's family for whom we exist. It is the quality of their care, their trust in our system, their satisfaction with their treatment whether for the soldier on a battlefield or their families in all the places we send them across the United States and around the world, that is our ultimate grade. Managing in this context means the right care by the right provider at the right time; care delivered efficiently and effectively without "hassle". This has been reaffirmed by Congress with the generous medical programs in the National Defense Authorization Act this last year. It has been reinforced by the Army Leadership as Well Being has become a major thrust in the Army's Transformation.

I sit before you with my fellow Surgeons General. We cannot provide outstanding managed care without working closely together. Each of us have a responsibility to support the warfighters of our own service; to cover the unique environments and cultures that gives us the best Army, Navy, and Air Force in the world. But in the business of managing care, we share a common passion for quality, for the improved and sustained health of our military families, and the links to those retirees who have served this nation in the past.

TRICARE is the program that provides the military health care benefit for 8.1 million eligible beneficiaries throughout the Military Health System. TRICARE brings together the health care resources of the Army, Navy and Air Force and supplements them with networks of civilian health care professionals to provide better access and high quality service while maintaining the capability to support military operations.

A majority of the beneficiaries receive most of their care from the military treatment facilities that are part of the Direct Care System. During the drawdown in the early 1990s, the Army Medical Department shrank by 34.5 percent, commensurate with the rest of the Army. The number of eligible beneficiaries only declined by 13 percent. This created a large gap between the capacity of the Direct Care System and the needs of the beneficiary population. This also created the requirement for our Managed Care Support Contract Partners.

Since 1995, the TRICARE Management Activity, representing the Department of Defense, has awarded seven contracts to 5 different contractors to provide health care in all 12 administrative regions of the United States. These contractors build civilian managed care networks within their region(s), handle claims processing and augment the Direct Care System as needed at the local military treatment facility level. This has been an effective but expensive partnership, partly because, with our downsizing and changes in cash flow, we have seen care shift from care we can deliver to care we purchase through the contracts.

One of my top priorities as Surgeon General is to optimize the direct care system. Optimization is essential to improve access and to control the costs of health care across the Military Health System. Increased efficiency is even more important with the recent passage of the National Defense Authorization Act for Fiscal Year 2001, which enhances the health care benefit for the military family. I have charged our Regional Medical Commanders with optimizing the productivity and utilization of our hospitals and clinics consistent with sound business practices. This means insuring adequate support staff supports the clinician, it means making the physical improvements needed to increase efficiency. I am not asking for a wish list, but rather for business plans that will clearly identify the payoffs for this investment. This type of targeted investment of resources in support of the direct care system is overdue. Successful optimization will decelerate the rising cost of health care. In time, it will relieve pressure on the services' Program Objective Memorandums and

reduce diversion of funds to the Defense Health Program, while improving customer relations and patient satisfaction.

In October 2000, optimization began in the Northwestern TRICARE Region (Region 11). The Lead Agent has been given expanded authority to allow for better decision-making. Success in Region 11 Pilot Program is of the highest priority and will lead the way in transforming the way that we do business across the Military Health System.

But, Region 11 is not the only place striving for innovative ways to improve quality and efficiency. While there are many success stories, the following cases demonstrate the fiscal opportunities our medical treatment facilities can execute.

—Tripler Army Medical Center in Honolulu, Hawaii, provides an example. The $3.5 million business plan initiative investment implemented several years ago targeted the replacement of certain resource sharing agreements that were not cost effective with medical treatment facilities staff. The elimination of these agreements not only returned $1.1 million in annual cost savings to the Government after the contractual bid price adjustment, it also provided the medical treatment facilities with greater flexibility in providing health care to the active duty as well as other non-CHAMPUS beneficiaries. Tripler Army Medical Center also plans to initiate a satellite pharmacy at the new Navy Exchange on the island of Oahu. The satellite pharmacy initiative currently being proposed is focused on reducing the managed care support contractor's claims for prescription drugs in an effort to risk share the cost savings this joint venture will achieve. Preliminary estimates project 30 percent to 40 percent savings in the contractor's retail pharmacy costs that we will risk share through the bid price adjustment process. Since the contractor has returned funding to the Government at each bid price adjustments for the TRICARE Regions 9/10/12 managed care support contract, this initiative should reinforce the positive cash flow to the Government.

—Darnall Army Community Hospital in Fort Hood, Texas, initiated several business case initiatives last year focused on providing the full continuum of health care to their Prime enrollees at the military treatment facility by minimizing the need to purchase care from civilian sources. The military treatment facility is also proposing additional recapture opportunities this fiscal year to continue their health care commitment. The scope of their initiatives range from increased staffing to minor facility modification in their endeavor to maximize military treatment facility capabilities to a full potential. A few examples follow:

  —The obstetrics business initiative increased military treatment facility staffing for certified nurse midwives and support staff to maintain existing Obstetrics workload in-house. This enabled the recapture of 40 deliveries per month that had been previously disengaged to the civilian network. The investment of $1 million has a projected return of $2.3 million and cost avoidance of $4.7 million.

  —The internal medicine business initiative increased military treatment facility staffing for civilian internists to replace lost military physicians. The investment of $417 thousand has a cost avoidance of $1 million.

  —The orthopedic business initiative will add a civilian physician and support staff to the military treatment facility. The investment of $400 thousand has a projected recapture of $817 thousand in orthopedic claims currently in the civilian network.

  —The satellite pharmacy initiative currently being proposed is focused on reducing the managed care support contractor's claims for prescription drugs in an effort to risk share the cost savings this joint venture will achieve. As part of the resource sharing agreement the government would fund the facility modification costs for a satellite pharmacy to be located at the Fort Hood local Post Exchange. The contractor would provide pharmacy staffing to dispense the prescriptions and funding to procure the pharmaceuticals through government sources. A preliminary study of the top drugs prescribed in the civilian network projects an estimated 150 percent savings by using the Federal Schedule pricing versus average wholesale price for pharmaceuticals.

—Madigan Army Medical Center in Fort Lewis, Washington, has recently implemented a multi-faceted approach towards increasing their inpatient ward and surgical capabilities as part of the TRICARE Region 11 Lead Agent Pilot Demonstration. By increasing their military treatment facility staff, they plan to increase their average daily inpatient census from 123 to 133 and expand their average daily operating rooms from 9 to 11. The Lead Agent's goal is to optimize the Military Health System and reduce purchased care costs currently borne by the government and the managed care support contractor in Region

11. Based on the time-phased investment plan, the region projects a $7.2 million overall return on investment.

—Evans Army Community Hospital in Fort Carson, Colorado, has submitted a business initiative to expand their military treatment facility orthopedic staffing. Their goal is to realign the administrative Medical Board responsibilities from the military physicians to a physician assistant, orthopedic technician, and nurse. The reengineering process will avail the military physicians for direct patient care and surgical procedures at the military treatment facility. This action has the potential of recapturing a moderate amount of orthopedic civilian purchased care claims for a relatively low investment cost. Preliminary analysis estimates an annualized cost savings to the Government of $250 thousand after risk sharing with the managed care support contractor.

—South East Regional Medical Command (SERMC) has submitted a business initiative that will enhance the management and efficient use of our military and civilian hospital physicians by reducing data entry requirements and improving patient documentation accuracy. The initiative proposes the use of voice dictation equipment and coding staff to increase provider productivity by four appointment template spaces per day. The increased appointment templates have the potential of reducing active duty and CHAMPUS-eligible referrals for purchased care, which will decrease supplemental care and managed care support contract costs at each bid price adjustment. Additional intangible benefits are improved quality of care, greater billing accuracy for Third Party Reimbursements and Joint Commission on the Accreditation Healthcare Organization compliance.

Walter Reed Army Medical Center Washington, D.C. also initiated several business initiatives last year focused on increasing the volume and complexity of medical cases treated to strengthen its graduate medical education programs. The investments improved provider support staff ratios from less than 1 support staff per provider to more than 2. The actions also increased civilian nurse salaries in order to better recruit and retain nurses in a highly competitive labor market. Early results have been favorable; not only has the complexity of the average inpatient disposition, measured by case mix index, increased by more than 7 percent, but both outpatient and inpatient workload has increased by nearly 10 percent. The long-term impacts of these investments go beyond the graduate medical education programs and should become evident over the next several fiscal years. The increased capacity in the military treatment facilities should reduce the cost of our TRICARE contracts and competitive salaries for civilian healthcare employees will improve our ability to recruit and retain the best personnel in a dwindling labor market. A final benefit of the investment is improved staff and patient satisfaction.

There are systems issues also that contribute to this optimization. The Army Medical Department has been at the forefront of the Department of Defense in reengineering supply chain management, leveraging into strategic partnerships with the Military Services, the Defense Logistics Agency, and the Department of Veterans' Affairs to increase purchasing volume and obtain the best value. We have also invested in technologies such as Digital Imaging Networks, Point of Use systems, and pharmacy robotics to improve productivity, accuracy, and cost accounting. The Army Medical Department has embraced acquisition reform and electronic commerce initiatives to reduce paperwork, improve responsiveness, and enhance delivery of the healthcare benefit.

The expanded pharmacy benefit beginning April 1, 2001, will include improved access to a wider variety of appropriate and cost-effective medications through the National Mail Order Pharmacy and the TRICARE retail pharmacy network with minimal co-pays. Beneficiaries who utilize the military treatment facility pharmacies may continue to do so with no out of pocket expense. The act further authorized access to non-network pharmacies with an annual deductible of $150 and a co-pay of $9 or 20 percent per prescription, whichever is greater. Where we can bring this work back into our system, we will benefit from our favorable pricing.

Effective October 1, 2001, eligible beneficiaries who continue to receive medical care from their current Medicare providers will have TRICARE as their second payer. TRICARE will pay their out-of-pocket costs for services covered under Medicare. In addition, they will have access to benefits that may not be covered by Medicare. To participate, beneficiaries must be eligible for Medicare Part A and enrolled in Medicare Part B. This is a step in the right direction towards keeping faith with our most senior retirees. Where we can leverage the existing infrastructure of the direct care system by covering the marginal costs of caring for this expensive class of patient, we will save the taxpayer's dollar and protect an ever dwindling Medicare trust fund.

We continue to pursue the Information-management systems that are essential enablers for optimization. We are scheduled to begin deploying the Composite Health Care System II that augments the capabilities of Composite Health Care System I this summer. After a prolonged and exhaustive redevelopment process characterized by superlative collaboration between technical and functional experts, Composite Health Care System will provide a legible and readily available computerized patient-record system that will be shared across Composite Health Care System hosts. Through it, providers will be linked to laboratory, pharmacy, radiology, and other services. By eliminating duplication of effort in record input, it will facilitate interaction between providers and patients.

Additionally, Composite Health Care System II will support best business practices, medical surveillance, and clinical research by permitting rapid data query on individuals and populations, which will supply critical information to providers from treatment room to Army Medical Department headquarters. Composite Health Care System II will be the heart of cutting-edge health services and will provide support to optimization across the Military Health System. Early success in optimization is critical to sustaining the Military Health System business reengineering momentum. However, neither optimization nor any other improvement in health services delivery can be accomplished without quality healthcare professionals. Recruiting and retaining quality medical personnel is a major concern of the Army Medical Department leadership.

The civilian health-care industry is very attractive to our mid-term officers, enlisted personnel, and civilians. We need to find new ways to compete with the civilian health care industry. We need additional incentives and benefits to attract and retain quality people. Most importantly the quality of practice that comes from adequate support staff, quality facilities and a full spectrum of patients where the patient is the focus of the effort are the factors that will attract and keep our quality people on our team.

Special pay authorities are becoming inadequate to provide sufficient incentive to meet aggregate end strength needs. Special pay rates have remained fixed (in dollar amount) since 1990, resulting in a climate of devaluation. This devaluation is impacting on the Army Medical Department's ability to retain the right number and specialty mix of qualified clinicians in the long-term. To that point, the military Surgeons General have requested the Flag Officer Review Board at the Office of Assistant Secretary of Defense, Health Affairs to evaluate and develop Legislative proposals which will address this issue in the fiscal year 2003 Unified Legislative and Budgeting process.

These proposals will serve to increase special pays for physicians: variable, medical additional and incentive special pays; board certification pay and multiyear special pay. The dental variable and additional special pays; board certification pay, dental officer multiyear retention bonus, and the dental officer accession bonus. Also proposed increases in the optometry, veterinary and pharmacy special pays; nonphysician and diplomat board certification pays; nurse anesthetist incentive special pay; and the nurse and pharmacy accession bonuses. The increases approved in the ULB process will be submitted for inclusion in the President's Budget for fiscal year 2003.

In the National Defense Authorization Act for Fiscal Year 2001 there is a new Critical Skills Retention Bonus. The Department of Defense is pending implementation of this bonus to provide a financial incentive to positively influence retention decisions of members in designated critical specialties with manning shortages or skill imbalances, and high training or replacement costs. It is the Army Medical Department's desire to use this bonus as soon as available and appropriately funded, to pinpoint our potential and known critical specialist retention shortfalls.

A 1996, Office of the Chief, Army Reserve, Study found job insecurity to be the primary problem that adversely affects retention and mobilization. Eighty-one percent of the 835 U.S. Army Reserve physicians surveyed responded that they could mobilize for up to 90 days without serious impact to their civilian practices. Therefore, the Assistant Secretary of the Army (Manpower and Reserve Affairs) signed a policy initiating a test program to limit the involuntary mobilization period for Reserve Component physicians, dentists and nurse anesthetists to 90 days.

The test program will be evaluated at the end of three years to determine its effectiveness for recruiting and retention. The Office of the Surgeon General will report findings to the Assistant Secretary of the Army (Manpower and Reserve Affairs) by September 30, 2002, with a coordinated recommendation as to whether the 90-Day Rotation Policy should be continued and expanded to other specialties.

There have been major adjustments to the Defense Health Program since submission of the fiscal year 2001 President's Budget. Congress passed an emergency supplemental appropriation of $1,311 million in fiscal year 2000 which was used pri-

marily to fund prior year contracts, contract claims, and private sector care fact of life changes. This past summer's program review resulted in a fiscal year 2002 Program Decision Memorandum which provides an additional $593 million to the Defense Health Program primarily for private sector care. Despite major adjustments to the Defense Health Program there are still critical funding requirements.

Efforts have begun to address the fiscal years 2002–2007 impact of new health care as legislated in the National Defense Authorization Act for Fiscal Year 2001. Work is underway to establish the Department of Defense contribution to the Department of Defense Medicare-eligible Retiree Health Care fund and to make necessary fiscal adjustments to implement accrual financing procedures for financing the Medicare-eligible retiree benefit beginning in fiscal year 2003. These actions do not, however, address any fiscal year 2001 funding implications of the National Defense Authorization Act for Fiscal Year 2001. The three services with TRICARE Management Activity and the Department of Defense (Comptroller) are working the shortfall issues with the Defense Medical Oversight Committee.

I am concerned that past and future funding problems in medical facilities inventory may contribute to reduced quality of care, and hamper our effort to transform, modernize and optimize the Army Medical Department. Continued problems in funding of funds to support maintenance, repair, and modernization of aging inventory may increasingly lead to systems failures that result in death or injury to patients; disrupt the normal delivery of health care services; risk regulatory compliance; lead to a less professional patient care environment; and significantly increase future repair requirements and costs. The condition of our facilities will become a quality of life issue that may affect recruitment/retention. Our challenge is to overcome the effects of long-term neglect and low funding levels which continue to degrade our facilities. Substandard medical facilities will adversely impact our ability to deliver quality health care within the Military Health System while increasing total major repair costs, and ultimately the total cost of military healthcare.

The average annual funding level is $68.4 million for new construction (0.89 percent Plant Replacement Value). These funds are required to modernize our aging facilities and minimize chronic and expensive repair problems. This level of funding in this account results in a 125-year replacement cycle for the Army's medical infrastructure. Any construction funding shortfalls burden the shrinking maintenance and repair budget through expensive repairs of failing systems. Specific major construction projects requiring attention include the Armed Forces Institute of Pathology, the Medical Applied Instructional Facility, and the Center for Health Promotion and Preventive Medicine.

Army Medicine is more than an HMO. Our system of integrated care, teaching medical centers to outlying health clinics, school house to research and development, form the base for supporting The Army across the world and across the spectrum of conflict. We do that quietly and on a daily basis as we field the TOE force, engage with both active and reserve forces, and respond to my Chief's vision of our Army's role in alleviating human suffering.

There are approximately 1,400 Army Medical Department personnel currently deployed in 20 countries in support of Smaller Scale Contingencies and Peacetime Engagement Activities. In the European Command area of operations, approximately 700 Army Medical Department personnel provide medical support to Operation Joint Forge and Joint Guardian, conduct MEDFLAG's in Africa, MEDCEUR's with Partnership for Peace nations, and conduct humanitarian assistance missions in Kosovo, as part of Operation Provide Hope. In the Southern Command area of operations, approximately 150 Army Medical Department personnel provide medical support to Joint Task Force-Bravo, and provide medical care to specified host nation countries under the Medical Readiness Training Exercise program. These activities serve to enhance the Southern Command theater engagement strategy in various countries within the area of Operations.

In the Pacific Command area of operations, Army Medical Department personnel mainly engage in and support exercises in preparation for their wartime missions. Deployed numbers vary depending on the size of the operation. Other activities include Preventive Medicine Support in the area of responsibility; Veterinary support to Thailand, Vietnam, and Singapore; and medical support to Joint Task Force Full Accounting, which serves to search for and identify remains of missing servicemen from the Vietnam war. In the Central Command area of operations, there are approximately 250 Army Medical Department personnel deployed to provide medical support to Operation Desert Spring (standing Task Force support in Kuwait and Saudi Arabia) and Operation Northern Watch (support to on-going operations in Saudi Arabia which provide oversight to Iraqi aircraft engagements.

Other medical support activities engage in exercises that provide preparation for their wartime mission, and conduct reciprocal medical training between the various

countries within the area of operations. These operations serve to enhance the Combatant Commander's theater engagement strategy by enhancing military to military working relationships through medical activities. In the Joint Forces Command area of operations, an average of 300 Army Medical Department personnel are deployed to provide medical support to the various Combat Training Center rotations, and other special interest events within the Continental United States. In addition, Army Medical Department personnel are actively engaged in planning the medical support to home station mobilization for the 29th Infantry Division (Army Reserve National Guard) and other reserve component units deploying to the Balkan region.

United States Army Reserve Component medical units make up over sixty percent of the Army Medical Department's total deployable forces and are an integral and vital part of the Army Medical Department's mission capability. Our medical reserve components are being mobilized at a greater rate than at any other time in recent history. The Army Medical Department, as part of today's power-projection force, is different; we can only accomplish our mission using a mix of Reserve and Active Component forces.

This year has marked some important milestones in the progress toward more effective integration of the Active Reserve Component medical forces. For example, today, in the Balkans, the United States Army Reserve is responsible for providing many of the units that, in conjunction with selected Active Component units, are deployed to comprise the medical task forces supporting our mission in that region. The Army Medical Department has also activated two reserve multi-component medical units, at Fort Sam Houston and Fort Meade, to increase unit readiness through blended resources. We have instituted a program of Active Component/Reserve Component individual personnel resource sharing, utilizing our Professional Officer Filler, to allow one component to fill readiness requirements within another component's unit assets.

Army Medicine has been a part of our Army since July 1775. It has produced giants of American Medicine, it has advanced the science that benefits us all, it has expanded for World Wars, it has linked to the American People through the care of their sons and daughters. This month we celebrated the 100th Birthday of the Army Nurse Corps. Next month we will celebrate the 90th Birthday of the Dental Corps. As long as we have men and women defending this country our value set as a Nation demands a quality medical force to support them. I would like to thank this Committee for your continued commitment and support to quality care for our soldiers and to the readiness of our medical forces.

TRICARE PAYMENTS

Senator STEVENS. Thank you very much, General. I do not want you to take my comments as being critical, but I am worried about the cycle that we see right now. It is my understanding that there has been a settlement now and the terms for TRICARE have been renegotiated for the period from fiscal year 2002 to 2007 and that the net result of that negotiation has increased the shortfall in the predicted funding from $6 billion to $20 billion.

We provided $1.3 billion in the emergency supplementals for the Department in 2000, as I said. $696 million of that was for the direct care and $616 million for TRICARE. But it is my understanding that the settlement for TRICARE has used a substantial portion of the amount of money that we thought we were providing for direct care.

So I want to ask you some sort of pointed questions. Do you think that we made a mistake by closing too many hospitals, military hospitals? Are we reducing the defense military medical staff down to the point where we are over relying on TRICARE providers? Do we have the control in the future over the cost for TRICARE that we should have as compared to the controls we have over the direct care providers in our hospitals?

Do you see the same problem that we see, at least I see, in terms of the way we are dealing with TRICARE and direct care now? It seems that you are paying TRICARE first and then the direct care.

If there is a shortfall, that falls on the direct care providers. That seems to be in reverse. What we need in the event we ever have an emergency, God forbid, is we need the direct care providers. We are not going to be able to send TRICARE providers overseas somewhere.

Our main task should be to maintain a robust system of direct care. It seems to be slipping back every year so that more and more is going to TRICARE. Am I wrong?

Admiral NELSON. I share your concern, Mr. Chairman. Mr. Chairman, out of the $1.3 billion supplemental last year, the direct care system of Navy medicine got $52 million of that in 2000. I think all of it or all of our part of it for 2001 went to the contracts.

Senator STEVENS. I am informed that you got $52 million, the Army $58 million, and the Air Force $38 million, but we thought that you got $696 million. That money went to the TRICARE settlement, and the future settlement is even more extended as far as the obligations for TRICARE in the future.

I am not opposed to TRICARE, but I think we ought to find a system whereby we provide as much as possible of the medical care for the military through the direct care system, that will maintain our military medical system in the event of a crisis.

Admiral NELSON. One of the issues that you raised and that the three Surgeon Generals (SG's) have argued each of the last 3 years is pay the direct care system first, give us a predictable, stable budget and then let us hold the deficit against contracts if there is a deficit, and let us try to optimize our system with good investments, good business decisions, to take back as much of the care that has gone to civilian contractors as we can.

It has been shown that we can do it less expensively. But that has not been the direction that has been pursued. Actually, I have watched for the last 3 years that my available resources have dropped through out the year. Resources not only started out low but dropped through the year. This year, right now, I am sitting right on the line of not having an executable budget.

TRICARE EXPENDITURES

Senator STEVENS. Well, it bothers me. We know that TRICARE expenditures must be paid because people go to court or go into some proceedings. You will have additional costs, attorney's fees, etcetera, if you do not pay them. On the other hand, it seems that, now that we have negotiated out to 2007, it is predictable that there is a shortfall in that system. The contracts have already been signed and I am sure once we sign contracts that TRICARE is going to be used right up to the top dollar.

But that is coming right out of the direct care costs, the direct care allowances. Would it help you all if we had two separate appropriations, one that had to be used for direct care and one that was available for technology?

General CARLTON. Yes, sir, it would. Your observations are right on the money and your dollar amounts are exactly right. We got 10 cents on the dollar on the supplemental that was directed at the direct care system. We have written bad contracts, we know that. We are in the process of trying to fix that. We are in the process

of looking to say, have we set this whole thing up correctly through our Defense Medical Oversight Committee.

But the problem is deeper than that. The problem in the country is that we have no flexibility now to surge in the country, not away from the country in a wartime scenario, but no capability to surge in this country if we have a mass casualty. I believe the military is going to get called very, very quickly if we have a mass casualty of any sort, whether it is chem-bio or simple trauma, and a robust military medical capability is one way and one way that is very clear to assure the national safety.

So your comments are exactly right on.

Senator STEVENS. I am really worried, because the net result of what I see is a catastrophe, and the people that get pushed aside are the retirees and the veterans and those who are really not on active duty, and that in effect will be breaking our promise again.

SHORTFALL

We have closed too many military hospitals. I wish someone would make a study of those hospitals, why we did that. I do not know why. I know we closed the bases, but you did not have to close the military hospitals when you closed the bases in my judgment. I hope that, somehow or other, that you gentlemen, you have the experience and we do not, but from where I sit the problem is you are paying those bills first for TRICARE.

We look now at a funding level for 2001 and I am told that the Secretary's office has identified a $1.4 billion shortfall again, and we are going to face the problem of what we do when the supplemental comes up with regard to that. Everyone around here is really cautious about talking about supplementals. Some say we are not even going to have one. What I see, what we see in terms of funding, not just in your department but many, is we have been funding on the basis that there will be a supplemental.

I fault the last administration for that and the process that we have all followed. But right now I do not know how to play catch-up. I would love to have your guidance in trying to find some way to do that. I do not see how you can execute the 2001 program now unless we give you a supplemental for the balance of the year some time along the line. Do you agree with that?

Admiral NELSON. Yes.

General PEAKE. Sir, I agree with that. I think you are exactly right in terms—if I could answer first with the notion of have we closed too many hospitals and that whole notion that we could take, potentially take care of everybody within the direct care system. I do not think that we could do that. The Army Medical Department is down about 34.5 percent from what it was in 1989. That is about a thousand-plus less doctors than we were in 1989, about a thousand-plus less nurses than we were in 1989.

Our whole Army came down about 36 percent during that time, but the patient population came down only about 13 percent and now slightly heading back up.

We will have to leverage, I think, sir, the civilian industry somehow to be able to meet our obligation to these people, to the over 65 now that really becomes a bigger number. I think we need to figure out how to do that. You talk about two separate pools of

money. I worry about that a little bit, because then you start saying, well, who is the manager of this system.

Senator STEVENS. I better talk about it some other time. I yield to Senator Inouye, but I will say I do not see enough use of reservists and National Guard personnel in your direct care. I think the total force, they are over there in terms of—we are just back from Europe. The National Guard is over there in several places on active duty and I do not see that there is the same assistance to total force coming from the guard and reserve as far as your part of the defense structure is concerned.

Senator Inouye.

Senator INOUYE. Mr. Chairman, I want to commend you for bringing up this matter, and also Senator Domenici, for bringing up the matter of TRICARE. We are just seeing the initial problems both of you have referred to. I believe there are 8 million eligible, is that not right?

General CARLTON. Yes, sir.

Senator INOUYE. We are currently dealing with about 3 million people in TRICARE at the present time?

General CARLTON. Perhaps a little bit higher, but close, yes, sir.

FUNDING SHORTFALL

Senator INOUYE. If we are having all the problems with just 3-plus million out of that 8 million, what happens when we will be responsible for the care of 8 million people?

General CARLTON. I think we face a bigger bill in the out years, yes, sir.

Senator INOUYE. So the problem that my chairman has noted is something that, we do not have a solution for, even though we know the problem exists. I hope that the surgeon generals will be able to come up with some useful recommendations.

It would be a drastic step to require two separate funds in order to solve this problem, but that is how far we have gone in thinking of how to help.

The matter of underfunding that Senator Domenici brought up has been a major concern to us. You have your mission of readiness, and your mission of providing health care to millions of patients, but then we find that each fiscal year when judgment day approaches you are underfunded.

Now, I know what you have done, but for the record can you tell the public what steps you go through in order to make up for that underfunding and still provide patients the care they need.

Admiral NELSON. You are asking, with the current shortfall, how will we manage the year without a supplemental? There are several issues involved and let me address them step by step, if I might. We have heard the two figures, $1.2 billion and $1.4 billion. The issue that worries me about $1.2 billion is that for the three medical departments of that $1.4 billion there is only about $200 million in the request for supplemental for the direct care system. $1.2 billion potentially leaves us off the board.

Now, I say that a little bit in jest, but not entirely, because my concern is the direct care system is hurting. Now, there is the recognition, and it has been validated by the Defense Medical Oversight Committee (DMOC), that there is a requirement for $161 mil-

lion 1 April to start a number of the initiatives that are in the NDAA. If there is not another source of funding found for them, it has been suggested that it will come out of the direct care system.

SHORTFALL

My portion of that would put me in a position that I would have to take very drastic measures, and I hesitate to say them out loud, but I would have to look at furloughs, I would have to look at changing access to pharmaceuticals. I would completely stop maintenance and repair dollars. I would have to make up in the neighborhood of $50 million out of a budget that is already—we already are looking at $8 million below what we call executable. I have got to make that much up already.

So it is a very uncomfortable year for Navy medicine.

Senator INOUYE. Anything in the Air Force?

General CARLTON. Yes, sir. What we would do, as we have done for years, which is driving this huge managed care support contractor, is offload to the managed care support contractor, and then we see it at some multiple of price, but we do not see it for a year or two. There is nothing left in construction, in real property maintenance. Our equipment is literally well beyond its life expectancies. Our facilities are falling down.

We cannot absorb if there is no supplemental. This profoundly—you have hit it on the head. This profoundly affects retention, recruitment, satisfaction. It is no wonder that among all of our corps our retention and recruitment are down. People are concerned that we do not have a viable program for the future.

So you hit the nail on the head, sir, where we must establish a reliable, modern system. We must then recognize that the world has changed. With the National Defense Authorization, we are in a competitive group. If we do not provide excellent service, then we will pay for it some other way at much higher costs.

General PEAKE. Sir, it is a cash flow issue that gets to exactly what Admiral Nelson was talking about. 60 percent of the budget at a local hospital for us is personnel, civilian personnel. So you wind up having to squeeze that area or supplies or deferring maintenance, which then puts off a bill for the direct care system the next year.

What it also does, in addition to creating great dissatisfaction among the providers, who just do not want to work in a place like that, so they vote with their feet, but then the patients become disenfranchised as well and it creates a vicious cycle. Then they go downtown, as General Carlton has outlined, to the managed care support contractor, because they need the care. It is hard to park that pregnant lady. She needs to get that care.

Then they get in that system, get comfortable in that system. It is hard to get them back when at the end of the year a supplemental comes and we hire some of the people back. It is an uncomfortable way of doing business and the lack of predictability is felt very, very acutely at the patient care level at the facilities, sir.

UNIFORMED SERVICES UNIVERSITY OF HEALTH SCIENCES

Senator INOUYE. I have many questions. I will ask one more before I yield. As all of you are aware, the Uniformed Services Uni-

versity of Health Sciences, USUHS, from the time it was conceived has been under attack. Today there are fewer critics, but there are those among my colleagues and those in the administration that question its importance. Both Senator Stevens and myself are convinced we should have another one.

Of all the military special schools in the United States, I believe the retention rate among graduates beyond obligation is over 80 percent, is that not correct?

Admiral NELSON. It has been very high, yes, sir.

Senator INOUYE. I do not want to put on the record what it is for West Point or Colorado Springs or Annapolis, because they are below that.

Secondly, is it not correct that we have had problems retaining medical personnel in the reserves since Desert Storm, and not very many doctors are joining the reserves.

General PEAKE. If I can address that, sir, it is true we have a real shortfall in our reserves. There are a number of folks who just could not take that length of time away from practice. It is an area that we are addressing very hard in terms of recruiting and retention. But we have an aged population and there is a significant number of those folks who are coming into the retirement window, in addition to those who are not coming in to fill the ranks because of the Desert Shield, Desert Storm experience.

KOSOVO

We are working. We had two hospitals now just recently go into Kosovo. What we have done is with a 90-day rotation, as opposed to a 179-day rotation, we think that we can get reserve providers out of the window of vulnerability, if you will, in their civilian practices. We are studying that now. The first rotations are done. What it does is rotates people more frequently.

But we are trying to be attentive and understanding of the needs of the reserve physicians. They are very important to us both in the deployment piece and in backfilling our hospitals here at home.

Senator INOUYE. General Carlton, one of the arguments made by critics of USUHS is that there are a lot of medical schools all over the Nation; why should we have one for the military? Is there such a thing as military medicine?

General CARLTON. Yes, sir. I believe our opponents do not understand our business. When we define our business, they say "medical care" and they envision peacetime medical care as the only business we are in. In fact, we have two broad categories of businesses. One is called readiness, the other is called the peacetime benefit.

USUHS, as the best investment in readiness medicine we can make, provides a tremendous baseline for us. Then we train our Uniformed Services graduates in the benefit mission through residencies, but they have a foundation in readiness that we cannot get any place else. So we do not practice medicine in the military; we practice military medicine, and it is very, very different.

I believe that lack of understanding is what draws this fire for the Uniformed Services School.

Admiral NELSON. Senator, the three Surgeons General make up the Executive Board for the Uniformed Services University and we

have direct impact on some aspects of the University. I was skeptical of the university years ago, but over the last 8 years as I have commanded a major medical center and also been the Navy Surgeon General I have learned of the quality of the product of the University and the focus that it has on military medicine and the importance to us.

I would be hard put to be without the graduates of the Uniformed Services University (USU).

Senator INOUYE. In fact, is it not correct that the Secretary of Defense has awarded the three of you a special unit award?

Admiral NELSON. The award was to the university, yes, sir.

Senator STEVENS. Because of the work that you three have done.

Admiral NELSON. Because of the work of the university, yes, sir.

Senator STEVENS. Could you yield?

Could you give us a plan to develop a western university for military medicine?

Admiral NELSON. How far west, sir?

Senator STEVENS. We will not answer that on the record.

But I do believe we should know what it would cost. This one is running very well here, but I think to a great extent the people who are attending it are mainly from the East. I would like to check that out, too.

Admiral NELSON. Yes, sir.

Senator STEVENS. I think we should have an additional medical university for defense.

Senator INOUYE. There is a lot of space out there.

Senator STEVENS. Finished?

Senator INOUYE. Yes. Thank you, Mr. Chairman.

Senator STEVENS. Senator Hutchison.

Senator HUTCHISON. Thank you, Mr. Chairman.

Senator Stevens made a very good point and this is something that I too have observed. For instance, the Navy built a hospital in Corpus Christi, Texas, in the nineties. It is now almost totally vacant. They do offer clinic services only. But this is a pilot training center, Corpus Christi and Kingsville nearby. There is no emergency facility. If a pilot is injured in training, they go to the emergency center in Corpus Christi, Texas.

I would just ask the question if that is the most efficient use of those largely empty facilities? Perhaps it is, but I do think it is worthy of questioning. When you close a military hospital, then the many veterans who also have the ability to use those facilities on a space available basis have to go and get other care, which can also be more expensive.

Certainly all of you who have been in the military know that military personnel believe they get better care from military personnel rather than civilians. Now, I know the civilians give wonderful care and many are civilian type functions. As Senator Inouye said, it is pediatricians, it is gynecologists. But the unique situation that military people and their families have in moving around and having a different bonding situation with their medical facilities I think does augur for military-trained health personnel that can deal with the unique problems.

So I would just ask you to look at that. I am sure it is duplicated in other Air Force and Army bases where maybe we have available

space and maybe looking at the costs both for active duty and retired military would bring new results. It is at least worth looking at.

PERSONEL ISSUES

I would just ask the general questions. Obviously, health care is an intensive people business. There are unique situations for military personnel. I would just like to ask you what personnel issues any of you see that you think we should be aware of as we are reassessing how we best give this health care.

General Peake?

General PEAKE. The personnel issues that we are concerned about right now as far as the Army medicine is the issue of retention, making sure that we can attract and retain quality health care providers in our system. We want to train them well because those are the folks that stay with us, so we need to keep our graduate medical education programs strong and robust.

Already we have alluded to the pay issue. We have a pay gap that is increasing the way it is. I am looking forward to the final report from the Center on Naval Analysis, but the preliminary one is showing a gap anywhere from—an increased gap from what we had 10 years ago. People are just saying, well, with this increased optempo and with everything else, and, oh by the way, I do not have the ancillary people to support me in the clinics, so the status of practice. They start putting those various pieces together and they will then decide to go ahead and leave our service.

We need to not only increase the pay, as has already been discussed, we really do need to get something, I think before 2003. There is legislation that really does not have funding behind it yet in the NDAA that allows us to do some bonuses for critical skills. So I think we need to take that on and get some money behind that and do that in a shorter term than the 2003 Unified Legislation and Budgeting (ULB).

But we also need to improve the practice, and this investment in the direct care system that we have all been talking about would help us do that, give the ancillary people that allow the doctor not to have to type his own Temporary Duty (TDY) orders or his own clinical notes and things like that, or change the paper on the tables, as sometimes happens, but to make that kind of investment for the quality of practice.

Senator HUTCHISON. Thank you.

Any additions?

Admiral NELSON. I would very much agree with those. Those are the issues across the Navy as well. It is not just physicians, it is all of our folks who are involved in clinical health care. We are getting in critical condition on a number of the nurse corps positions, as well as physicians and readiness critical specialties.

The analysis CNA did within the Navy identified six areas of particular concern to practitioners concerning retention. Pay, as I mentioned, was the top one, the top concern. But the very issues that General Peake speaks of are included in some of the rest of them: the administrative, lack of administrative and ancillary support, the things they have to do for themselves, the lack of good information management systems to help speed up that side of

their health care, things that take away from their ability to see patients, spend time with their patients. Those are the factors affecting our health care providers, our inability to provide them with adequate support staff.

In the Navy—well, across the Military Health Services (MHS), we have a goal of 3.5 support staff to each provider. We are at 1.8 in the Navy. That is just very dissatisfying to providers.

Senator HUTCHISON. Thank you.

DIRECT CARE SYSTEM

General CARLTON. Yes, ma'am. I would echo what has been talked about. The reliability of our direct care system to pay for our people and a clear focus on customers—we are in danger of losing the trust of our customers because our funding profile has gone up and down so rapidly. It has to do with our business.

There is a recent example in San Antonio where we picked up a baby in Japan, Okinawa, Japan, that needed a heart-lung machine for transport. Several years ago I had been told to shut that service down because it was not cost effective for the business that I was in. My response was: You do not understand my business. My business is to provide stateside quality health care around the world. I told those critics no.

Well, we recently did that to a naval base in Okinawa. We picked up an Air Force family child who was dead, very nearly, would have been dead within an hour. In the standard of care in the country that they were in, that was accepted. It was not accepted in our standard of care.

Our families and our members overseas understanding that we will guarantee them stateside quality care. We did pick the baby up. We did transport them back to Wilford Hall, at great expense, and the baby is a normal baby home with mother now.

Our business is fundamentally different. I count that as a readiness business. The staff sergeant that appeared on KSAT News whose child this was said: "I had no idea of my medical benefits until I saw what the military will go to to take care of my family." I cannot buy advertisement like that.

So your point, it is a people-related business and sometimes we do things that from strictly a business perspective or a peacetime benefit do not make sense, but make sense in the great scheme of things that literally we are around the world.

Senator HUTCHISON. Thank you very much. That is a wonderful story.

Thank you.

Senator STEVENS. Thank you.

Senator Domenici.

BUDGET BLUEPRINT

Senator DOMENICI. Mr. Chairman, thank you very much.

I want to ask a question with reference to, today we got a little blue print from the administration of their budget plan. It is not in great detail, but it tells us generally. The little blue book, what is it called?

Mr. CORTESE. The Budget Blueprint.

Senator DOMENICI. Yes, the Budget Blueprint. We are analyzing it now, but let me ask: For 2002 do you have any idea what was put in for the health system that the military provides? Do you know what number is in that budget?

General CARLTON. No, sir. I have not seen that blue book.

Senator DOMENICI. So who would know what they put in there and how that number was arrived at?

Senator STEVENS. Senator, we are going to have the Deputy Secretary testify on April 4, who will be able to answer that question. I do not think these gentlemen have access to it, and I have not seen it, either.

Senator DOMENICI. I was just going to tell you, Mr. Chairman, if the same mistakes are made in that year's estimate in terms of inflation, if they are made in the 10-year plan, then my number is we are $18 billion short over a decade in terms of providing the service at today's level, which is a very big amount.

If in fact it is not in there, we will make room for it in the budget resolution, because we cannot do otherwise.

General CARLTON. Yes, sir. The problem is that does not include recapitalizing our system in the new world that we are in with the National Defense Authorization.

MENTAL HEALTH CARE

Senator DOMENICI. Let me include a couple of questions with reference to the kind of service you have. You know, in the United States the mentally ill population is a growing population. Those who are between 17 and 19, 21, 23, get a number of the serious mental illnesses, schizophrenia, manic depression, severe depression. It pops up very frequently in the age 17 through 23, 24. I assume you all know that, which causes me to think that you must have some mental health care that is specific to those with severe mental illnesses within the military system. Would that be a fair assumption?

General PEAKE. Sir, it is a fair assumption. It is an issue that, with that population, if you look at our expenditures, about half in some of our regions of mental health dollars that we purchase are for adolescent health care for dependents for mental health specifically.

Within the military, in dealing with soldiers we are all attentive to the notion of combat stress and bringing out those kinds of things. So we have units that involve themselves with really down at the grassroots level. They are active actually in Kuwait today. They spread out and they give command consultation and so forth to try to focus on this kind of issue.

Senator DOMENICI. I will be more precise. Do you have within the direct care system all through your services, do you have any programs or activities that are directed at the mentally ill within the medical definition today of "mentally ill"? I am not talking about needing counseling. I am talking about very sick people, schizophrenia, manic depression, depression.

There has got to be some with this that are entitled to care in your direct system. I am not talking about the outside system. If that is, do you have special programs with reference to it and how

can we find out what those programs are about and what they do? Would you answer that, please, all three of you?

Admiral NELSON. I think all of us have mental health programs and they are of varying strengths depending on location and requirement. At National Naval Medical Center in Bethesda, I know there is an adolescent medicine or a pediatric and adolescent medical health unit particularly for young people.

In our training center in Great Lakes we have seen an increasing number of serious mental illnesses in people who have volunteered as recruits, and we have to dismiss them from further service. But it is, I think, indicative of the population we are drawing from.

Senator DOMENICI. Well, maybe I will not ask each of you to answer that. Maybe I will not take as much time. The reason I am asking this is it seems to me we are entering an era with reference to the treatment of the severely mentally ill that, if you had a group that you had to treat within the military, it would seem to me that that would be a very, very excellent and exciting research—has research potential for the seriously mentally ill, because if you have a population that you are treating there is much that you can learn from it in terms of the efficacy of drugs and the like, and there are very many modern pharmaceuticals that help this population.

I assume it does not come to any of your minds that we have such a program going that could be identified?

General PEAKE. Sir, if I could comment. We have psychiatric training programs, but those are few. We do not have a lot within the Army system. As I say, most of our dependent care with serious illness like that would go out in the adolescent community.

Senator DOMENICI. Let me close by saying that all the problems that the health delivery system has in the United States—and believe you me, they are numerous. We really do not know where we are going in terms of how much America is going to spend on health care. But obviously, unless there are some big breakthroughs we are going to spend a lot more every year, and it is ever changing.

I compliment you for keeping the system together. Obviously, the TRICARE is going to be an enormous challenge. It is one of the largest systems we have in the country, and you all will be managing it by contractors and utilizing that. I hope it works. I hope it does not cost a leg and an arm. But if it does, I guess we are going to have to pay for it. We already agreed to.

RETENTION OF SPECIALISTS

Secondly, I would like to ask in closing if you would answer a question. It seems to me the specialties within the medical doctors at your facilities, those who are very good in one field and they are specialized, like surgeons, it would seem to me the turnover must be extremely high there. There is very good opportunities for those kind of specialists to get big jobs.

Is the turnover in that area higher than it is for those that do not have specialty qualifications? Any of you, do you know?

General CARLTON. Yes, sir, it is. We do not retain very many of those people.

Admiral NELSON. Part of the study that I will provide addresses that for the Navy in quite significant detail. The surgical specialties are the ones that we have the most difficult time in retaining right now, along with radiology. We retained no radiologist who was eligible to leave at the end of his initial service last year.

Senator DOMENICI. General?

General PEAKE. Senator, we have anesthesia, radiology. It periodically waxes and wanes about which tends to leave the most. But what it talks to is the importance of our graduate medical education programs, because that retains, A, the quality of teacher and people that want to be a part of a system where what they are focusing on is the patient. So that is why we have the kind of people that you need out at the military treatment facilities within the D.C. area, as an example.

TRANSFER OF UNUSED EQUIPMENT

Senator DOMENICI. General Carlton, I will close on a personal note. This committee helped me put in language in the VA–HUD bill last year for the transfer of some unused equipment that is sitting in a hospital in Cannon Air Force Base which is unused. We provided that you could transfer it to a new community hospital that is being built.

I am going to leave you this note because after the statute was passed month after month and nothing happened. It appears from the top level the signal is not being given that you are going to comply with this statute that permits the transfer of unneeded equipment at Cannon Air Force Base to a new community hospital that could use it. Would you look into that for me, please?

General CARLTON. Yes, sir, I certainly will.

Senator DOMENICI. Thank you.

Thank you, Mr. Chairman.

Senator STEVENS. Thank you.

Gentlemen, if I am informed correctly, you report individually to your service chiefs, but you get your funding through the Office of the Secretary of Defense, Health Affairs, and the TRICARE management activity. Is that correct?

Admiral NELSON. Yes, sir.

General CARLTON. Yes, sir.

JOINT MEDICAL COMMAND

Senator STEVENS. We are in a period of jointness now. Many people are lecturing us about jointness. What would you say as the surgeon generals of the respective services about a joint medical command? Would that help you in dealing with your problems?

General CARLTON. Sir, that is a structural fix to a poor modeling problem. Our service-specific activities are a very different culture in the Navy, Air Force, and Marine Corps. The danger of putting those two areas, the benefit mission and the readiness mission, closer together, which a joint command might do, would be that we would lose our readiness perspective.

I do not see that rearranging boxes would help us to solve the financial issue.

Senator STEVENS. What would be your suggestion for solving the financial problem? It seems to me we are facing a problem at the

Department level, when it has to sort of fudge a little bit on budgets, reduces your budget, and the people who negotiate your TRICARE contracts negotiate them for you and suddenly we find, as I said, a $14 billion gap in TRICARE now, right now, between 2002 and 2007.

Now, you are telling us, and I believe you are right, that you need a supplemental again this year. That is because someone else up at the top level cut each one of your requests. Why would not a joint command that would be able to deal at the Secretary level, instead of you going to the secretaries and service chiefs, and they go to the under secretary or assistant secretary of defense, and then it goes up the line, and each guy up the line has got a lot of pressures on him, and they are cutting you back as they face modernization requests throughout the Department.

I want to get out of this perennial circle of a supplemental for defense health financing every year. You are then in competition with the emergencies that have taken place in the country, and you do not have an emergency; you just have an underfunding situation. Supplementals ought to be dealing with emergencies and not with routine costs that are predictable and request in the very beginning.

You should be asking now for the moneys for 2003, right?

General CARLTON. Yes, sir.

Admiral NELSON. Yes, sir.

General PEAKE. Right.

Senator STEVENS. You would need a crystal ball to do that.

Admiral NELSON. Mr. Chairman, I have a little different view than General Carlton. I think there could very well be some value to a joint command. However, I think it must preserve the readiness side of what we do, the responsibilities and service culture issues that affect how we prepare for our readiness role and how we perform it.

I think, properly done, it could do both.

Senator STEVENS. It should be no surprise to you that when we asked the people who are really involved with the readiness for military combat they had the same response. They do not like joint commands. Our problem is how are we going to deal with funding?

What are your shortfalls this year? Have you got a projection for us on how much you are going to be short this year?

GLOBAL SETTLEMENT

Admiral NELSON. There is a lot of if's in it, in a way. We started out the year feeling that we were adequate; it was not great, but adequate. We have had a 1 percent withhold, so that cost me $17 million. We did not receive, in my case, $21 million of advances in medical practices, which was part of $100 million taken out. I think it was first started in 1999. It was taken out of the existing budget, but it was identified as a part that would be shared to us as we saw what the coming advances that had to be financed in military medicine were. At the current time I think that has been placed against the global settlement.

The rescission, which we all understand——

Senator STEVENS. Pardon me. Did anyone request the money to fund that global settlement?

Admiral NELSON. I am sorry, sir?

Senator STEVENS. Have you requested the money to fund the global settlement?

Admiral NELSON. I cannot comment on whether Health Affairs has done that. I think part of what they are requesting in the $1.4 billion includes some funds for that. But that would be coming out of Health Affairs and Tricare Management Activity (TMA).

But the recission was held entirely against the direct care system as well. So instead of what would have been a $3.5 million charge to me, it is $7 million, over $7 million.

Then with the talk of the $161 million potentially coming out of us, that is another $45 million against my budget. If all those things happen, I am approaching $140 million short.

Senator STEVENS. How about you, General?

General PEAKE. Sir, I am in a very similar boat. The supplement last year gave for us, as an example, about $49 million that was going to be for TRICARE Senior Prime bills and revised financing bills in 2001 money. That money, as an example, has been used for the global settlement. We had about $18 million in the advanced medical practice, which in fact pays for pharmaceuticals and appropriately pays for pharmaceuticals so that we can stay up with the standards of practice out there in the civilian world.

You start adding those pieces together, which may come. If all of that is in fact included in the $1.4 billion that Health Affairs is talking about, I could still lay out an additional about $153 million of shortfall kinds of issues for this year, things that allow us to—we invested some money in Walter Reed last year, as an example, in the North Atlantic region, and it takes a little while, but we are seeing about a 10 percent increase in their productivity.

Part of our issue is you cannot fund our venture capital or our initiatives in 1 year and then recoup the savings in that 1 year. So there is opportunities for investment in our system that will pay off in the longer run, even with the managed care support contracts. Things like investing in obstetrical recapture at a place like Fort Hood, you can bring back, make $332,000 as an example, but it will not come back until another option period when they renegotiate or do the bid price adjustment on the contract.

There is a number of examples like that, that you can pay for now, ultimately it is the right business decision, but without cash flow you cannot do that. So it is those kind of things that really do not show up sometimes, I think, in these budget submissions that you are talking about.

Senator STEVENS. General Carlton?

General CARLTON. Yes, sir. The $1.4 billion has been discussed. The Air Force number today is $158 million. That is broken down into $90 million for the direct care system, $68 million for the contractor. But it does not include the global settlement nor the new National Defense Authorization Act (NDAA) authorizations nor recapitalization of our direct care system, all of which, with the world changed as a result of that wonderful legislation, we must work out and must solve.

Admiral NELSON. May I correct my number? I said $140 million and actually to fully fund us would be $151 million.

Senator STEVENS. Well, we will do our best, gentlemen. I think we will be getting a supplemental some time the end of May. We will see what happens.

But I do appreciate your being here, and we are going to ask some of the questions of the panel that is coming in April of the type that Senator Domenici wanted to have a response to. I hope we can take this out of the cycle. I would hope we get to the day where we will not face supplementals except in emergencies. Then we will have greater stability, predictability, and I think the cost of the service that you provide would be less in the long run than this start and stop kind of funding.

We appreciate your help. Admiral, God be with you, my friend, and we look forward to seeing you down the line. I am sure I will bump into you along the line. We thank you again for your service to your country.

Admiral NELSON. Thank you very much, Senator.

STATEMENTS OF:

REAR ADMIRAL KATHLEEN L. MARTIN, DIRECTOR, NAVY NURSE CORPS, U.S. NAVY

BRIGADIER GENERAL WILLIAM T. BESTER, CHIEF, ARMY NURSE CORPS, U.S. ARMY

BRIGADIER GENERAL BARBARA C. BRANNON, DIRECTOR OF NURSING SERVICES, OFFICE OF THE SURGEON GENERAL, U.S. AIR FORCE

Senator STEVENS. We will now turn to the panel for the nurses. We will take sort of a 5-minute break.

Gentlemen, if anyone comments to you about your responses to my questions, you tell them to come and see me, will you?

This is a transition now to the chiefs of the nursing corps. Military nurses of all services are absolutely essential to providing care to the men and women in uniform so richly deserve. We thank you for all you do to make that happen.

We welcome back Admiral Kathleen Martin, General Barbara Brannon, and General William Bester. General, I think it is your first appearance here, is that correct?

General BESTER. Yes, sir.

Senator STEVENS. We congratulate you on your promotion and your new assignment.

Before we hear from you, let me turn to my friend Senator Inouye, who is sort of the godfather of the oversight of the nursing corps. It is better than being the grandfather.

Senator INOUYE. Before I begin, I would like to have my prepared statement relating to the Nurse Corps placed in the record.

Senator STEVENS. Without objection.

[The statement follows:]

PREPARED STATEMENT OF SENATOR DANIEL K. INOUYE

Good morning. I join the Chairman in welcoming Brigadier General Bester, Brigadier General Brannon, and Rear Admiral Martin to discuss Military Nursing Programs. It has been my pleasure to work with military nurses for many years, and I am proud to witness their numerous accomplishments.

We have an outstanding group of leaders testifying before the Committee today.

Rear Admiral Martin is appearing before this committee for the last time as the Director, Navy Nurse Corps. I would like to thank Rear Admiral Martin and com-

mend her for her dedication to the Navy, the nation, and her assistance to this committee.

Not only has she served as Deputy of the Navy Nurse Corps, she has concurrently served with distinction as commander of one of the premier Navy medical centers.

I would like to welcome Brigadier General Bester for his first appearance before this committee. I hope you will find this hearing a worthwhile experience and it will be the first of many productive discussions.

Finally, I would like to congratulate the Army Nurse Corps on its 100 year anniversary and thank them for the quality care its members have provided America's Service Men and Women over the past century.

Military Nursing is a profession that is at the forefront of our medical mission. Military nurses continue to provide outstanding care to their patients in all types of clinical settings, and have excelled in vital leadership roles.

The fact that three military medical centers are currently commanded successfully by Nurse Corps Generals or Admirals is testament to their ability, accomplishments, and competency as military officers.

The success of these nurses also illustrates the need for all military nurses to enter active duty with a minimum of a Bachelor of Science degree in Nursing.

Now it appears we will have a larger mission for the Military Health System due to the recently authorized expansion of TRICARE. This, in light of the current and future nursing shortage, will present difficult challenges to military nursing.

The challenge will be to: ensure readiness; retain officer, enlisted and civilian nursing staff; continue to educate advanced practice nurses; maximize usage of nurse practitioners, nurse midwives, and nurse anesthetists; maintain a strong research foundation to answer questions to which nurses need answers; develop new paradigms to successfully meet health care delivery problems; and last, but not least, continue to excel in providing outstanding care anytime, anywhere.

In order to meet these challenges the Nurse Corps must plan and implement policies that develop innovative ways to reduce health care costs while at the same time advocating for high quality health care.

I appreciate your attendance this morning and look forward to hearing about retention, readiness, practice issues, TRICARE, and research initiatives in the Nurse Corps.

Senator INOUYE. Like many of my fellow Americans, I have been the beneficiary of nursing services for many, many years. I am pleased, Mr. Chairman, that together we inaugurated the nursing intern program as a program of this subcommittee. At this time I would like to note one of the graduates of that intern program. She will be succeeding Admiral Martin.

Admiral Lescavage, are you here? Congratulations.

Admiral LESCAVAGE. Thank you.

Senator INOUYE. I wish to join the chairman in welcoming all of you here and tell you that it has been my pleasure to work with military nurses for many, many years. I have admired so many of your accomplishments.

Today is very likely the last time, Admiral Martin will be appearing before this subcommittee and I join the chairman in thanking her for her many years of service to our Nation. We appreciate that very much.

General Bester, this is your first hearing. Congratulations. I am glad the Army decided that the time had come for a man to be selected as chief of the Army Nurse Corp. This is one way nursing can get better recognition. This world of ours has not quite come to that level of enlightenment yet where it considers women to be the equal of men, and as a result nursing throughout the years has had to take a back seat in the health care professions.

I recall not too long ago when all of the TV weekly shows on hospitals and hospital care, portrayed nurses as always trailing behind doctors and they were the ones who were always faulted for mis-

takes that were made. Since that time I'm glad to say there has been an improvement in the perception of nursing.

I would also like to welcome General Brannon. We are glad to have you here.

We have heard the surgeon generals testify. Admiral Martin I would like to know what impact TRICARE will have on nursing services.

Admiral MARTIN. Sir, one good thing about TRICARE and TRICARE for Life is that it gives us many patients in which to enhance our competencies and retain our readiness. However, with TRICARE we see many conflicts with our dollars and with our funding, and our facilities are not configured to really meet the changing health care needs and health care environment.

Our nurses many times look on the outside for other opportunities and perhaps even better pay. So TRICARE really has had a positive effect on our nursing community, as well as a negative effect on our nursing community.

NURSING SHORTAGE

Senator INOUYE. Admiral Martin do you think you will be able to recruit enough nurses to meet the growing number of applicants for TRICARE for Life? For example, will there be enough nurses who are trained to take care of the elderly?

Admiral MARTIN. In the Navy we are having success with our pipeline programs, and those are our scholarship programs and our Reserve Officer Training Corps (ROTC) programs and our direct commissioning programs, our medical enlisted commissioning programs. However, when we try to recruit fully qualified nurses we are having difficulties. We are having difficulty recruiting civilian nurses for our civil service system. They see civilian pay, they see many of the bonuses the civilian hospitals are offering, and because of what I consider an antiquated personnel system it takes a lot longer to hire a civilian into our civil service program than it does for our civilian counterparts to hire.

Senator INOUYE. Do you have any recommendations on how we can reform that system? I notice that the length of time it takes for processing applications is about three times as long in the civilian sector.

Admiral MARTIN. Yes, sir.

Senator INOUYE. What can we do to make hiring civilians easier?

General BESTER. Senator, we are working very hard with the civilian personnel, with our civilian personnel counterparts, to try to get that system streamlined. It is a large impediment to the way that we do business, and with the additional TRICARE benefit coming on line, which we are all very much in favor of, that was passed in the National Defense Authorization Act, along with that comes no increase in authorizations in military nurses, of course. So where we have to get those nurses is from the civilian sector.

The processing times are just not conducive to allowing us to do that, and we are working hard with our civilian personnel counterparts to streamline that system. I think we have got interested applicants out there, but they have to wait too long to get hired.

Senator INOUYE. I would like to hear the nursing chiefs opening statements.

Senator STEVENS. Well, that is perfectly all right. I am sure they do not have any objections.

Go ahead. Would you like to proceed with your questions—with your statement, Admiral, your statement, and then going Brannon and then General Bester?

Senator INOUYE. May I?

Senator STEVENS. Yes.

Senator INOUYE. Admiral Martin, we will have your testimony now.

Admiral MARTIN. Thank you.

Good morning, Mr. Chairman, Senator Inouye. It is my pleasure to testify today as the Director of the Navy Nurse Corps and the Commander of the National Naval Medical Center Bethesda. Today's testimony does mark a milestone event. For the first time, this committee will gain our perspectives as Nurse Corps Directors as well as military treatment facility commanders.

First, I would like to address the military health care system's newest program, TRICARE for Life. As you have heard, this program poses special challenges for all of the services. The TRICARE for Life initiative provides us the opportunity to meet the health care needs of our beneficiaries in a way that we have not been able to in the past. Enrollment in TRICARE Prime will provide our over 65 population with access to comprehensive care at a time when it is most needed. For military medicine, TRICARE for Life will contribute to a robust training environment and provide the clinical competencies necessary to keep our personnel ready to meet operational missions.

However, TRICARE for Life presents significant hurdles. The resource shortages that we face at the facility level have serious implications on our ability for us to meet our mission. Presently, as you heard, we are struggling to provide a limited benefit to our over 65 beneficiaries. Without further resources, we will be unable to increase services to deliver the proposed comprehensive benefits.

One of the key principal resource issues is, as you mentioned, staffing shortfalls. Key to the success of TRICARE for Life is ensuring sufficient numbers of providers and support staff to enhance productivity and access to care. We continue to be successful in making effective use of our military personnel. However, a revamping of the civilian hiring process and improved funding for the entire health care delivery system is what we need to support that expanded benefit.

When we are talking about compensation, it is not just limited to nurses or physicians. It is really including all of our health care disciplines. I would say our technicians and other ancillary personnel are included in this shortfall. Military personnel work side by side with contract staff who command salaries far exceeding some of their military counterparts. This creates additional dissatisfaction for our military members.

Compensation is a very powerful driver in the decision to remain on active duty or to leave the service. Additionally, there is little elasticity left, as the health care dollar is stretched to cover advances in technology, escalating pharmacy costs, continuous training requirements, and numerous overhead expenses. There is a

constant tradeoff of tight resources for upkeep and renovation of old infrastructure.

I know you have been in our health care facilities and you have seen our aging buildings and their outdated configurations, which prevent us from keeping pace with the changing health care environment. Facilities are rapidly deteriorating due to scarce resources. These issues confront us daily as military treatment facility commanders.

As Nurse Corps Directors, a significant resources issue is the growing nursing shortage. We must employ effective recruiting and retention tools to maintain a healthy force structure in both our active and reserve components. An important retention strategy is advanced education, preparing our nurses to effectively lead diverse technical and professional personnel in the delivery of quality care.

The Federal Nursing Service Chiefs from the Army, the Navy, the Air Force, and the Veterans Administration partner with the Graduate School of Nursing at the Uniformed Services University to create advanced practice nursing education with a focus on military readiness. The nurse anesthesia and family nurse practitioner programs are becoming stronger as we support them with exceptionally talented instructors and expand the number of clinical training sites in our military facilities.

In closing, TRICARE for Life is welcome news to our beneficiaries. As we collaborate with our fellow service colleagues to achieve high quality, cost effective care, our patients remain our highest priority. I am confident military nursing has the leadership skills and the professional expertise to lead health care into the future.

I sincerely thank you for your support and for the opportunity to address you today. It has been an honor to serve as the Director of the Navy Nurse Corps and I assure you that my successor, Rear Admiral-select Nancy Lescavage, is the perfect choice to assume this leadership position in Navy medicine. I look forward, though, to our continued association in my position as the Commander of the Flagship of Navy Medicine.

PREPARED STATEMENT

Senator STEVENS. The commander of what?

Admiral MARTIN. Commander of the flagship of Navy Medicine, the National Naval Medical Center.

[The statement follows:]

PREPARED STATEMENT OF REAR ADMIRAL KATHLEEN L. MARTIN

Good morning, Mr. Chairman and distinguished members of the Committee. I am Rear Admiral Kathleen Martin, Director of the Navy Nurse Corps and Commander of the National Naval Medical Center. It is my pleasure to be here.

Today I would like to address two major programs: TRICARE for Life and Military Health System Optimization, an effort to make the most effective use of our resources. These two programs pose special challenges for the Military Healthcare System of today and tomorrow.

The TRICARE for Life initiative provides us the opportunity to meet the healthcare needs of our beneficiaries in a way we have not been able to in the past. The opportunity of the over 65 population to enroll in TRICARE Prime will provide them with access to comprehensive care at a time when their healthcare needs are becoming more complex. For military medicine, TRICARE for Life will contribute to

a robust training environment and provide the clinical competencies necessary to keep our personnel prepared to meet operational missions.

Both TRICARE for Life and Optimization pose significant hurdles. The resource challenges we face at the facility level have serious implications for our ability to meet our missions. Without further resources, we will be unable to increase services to deliver the promised comprehensive benefit.

One of the principal resource issues is staffing shortfalls. A key to optimizing health care is ensuring sufficient numbers of providers and support staff to enhance productivity and access to care. We continue to be successful in making effective use of our military personnel; however, there is a need to increase the numbers of civilian support staff in order to make Optimization work. For that, there must be improved funding for the entire system and a revamping of the civilian hiring process. The current civilian personnel system impedes our efforts to bring new staff on board in a timely manner, resulting in loss of potential new hires to civilian employers. The antiquated classification system prevents us from competing with civilian employers in salary and professional status.

Compensation is an issue for military staff as well. I clearly see this as an MTF commander. Military personnel work side by side with contract staff who command salaries far exceeding those of their military counterparts. This creates additional dissatisfaction for our military members. Compensation is a powerful driver in the decision to remain on active duty or to leave the service.

Additionally, there is little elasticity left as the health care dollar is stretched to cover advances in technology, state-of-the-art equipment, spiraling pharmacy costs, continuous training requirements, and a myriad of other overhead expenses. Finally, there is a constant trade-off of tight resources for upkeep and renovation of old infrastructure. World War II era building configurations prevent us from keeping pace with the changing healthcare environment, and facilities are rapidly deteriorating due to scarce resources.

These issues confront me daily as the commander of a military medical center. In my role as Director of the Navy Nurse Corps, I see the impact system-wide. Utilization of existing resources, advancing technology and an aging population are fueling the demand for multi-skilled, well-educated nurses to meet patient care needs in an increasingly intricate healthcare system. Navy Nurse Corps officers fulfill this need through their broad scope of professional practice. Basic preparation at the baccalaureate level provides leadership skills, critical thinking ability, and case management in addition to strong clinical skills. This enables them to serve in critical positions as clinical support staff for comprehensive care delivery as well as direct care providers.

However, we are competing with the private sector for baccalaureate prepared nurses. In light of the growing nursing shortage, we must employ effective recruiting and retention tools to maintain a healthy force structure in both the active and reserve components. The Nurse Corps has implemented initiatives that assist existing recruiting and retention processes. In partnership with Navy Recruiting Command, we created a multi-step recruiting plan that seeks the best-qualified candidates for the Nurse Corps. The current nurse accession bonus is a key component of our recruiting strategy. Our recruiting success depends heavily on your continuation of the accession bonus and educational stipend programs.

Given today's competitive health care environment, that may not be enough to maintain the force structure. Currently, only nurse practitioners, midwives and nurse anesthetists receive any type of special pay. That program has been a successful retention tool thus far, but the civilian-military pay gap is rapidly widening. Further retention bonuses may be needed to retain all types of nurses as competition increases for the dwindling supply.

An important retention tool is advanced education for Nurse Corps officers, which prepares nurses to effectively lead both military and civilian personnel of different technical and professional levels in the delivery of quality care, in any setting. Of note, over 23 percent of our Nurse Corps is master's prepared. The Federal Nursing Service Chiefs partner with the Graduate School of Nursing at the Uniformed Services University of Health Sciences to create a pipeline for advanced practice nurses. The nurse anesthesia and family nurse practitioner programs are becoming stronger as we support them with exceptionally talented instructors and expand the number of clinical training sites in military facilities. Innovative distance learning programs offer military and Veterans Administration nurses the opportunity to complete nurse practitioner certificate programs within their hospitals. Uniformed Services University provides superb educational opportunities for military nurses, and we look forward to future collaboration on creative educational initiatives.

In closing, the recent advent of TRICARE for Life and Optimization are welcome news to our beneficiaries, and arguably the most significant changes to our

healthcare system since the creation of the Civilian Health and Medical Program of the Uniformed Services (CHAMPUS) program in 1966. Navy nurses, in concert with the whole Navy Medicine team, look forward to using their considerable talents for the successful implementation of these new initiatives. But these talented people are not enough to achieve the task before us. I sincerely hope that our entire military healthcare system will be correctly supported so that we may meet our operational and peacetime missions.

As we collaborate with our colleagues in all the services to achieve high quality, cost effective care, our beneficiaries are our highest priority. I sincerely thank-you for your support and for the opportunity to address you today, I look forward to our continued association during my tenure as Director of the Navy Nurse Corps and Commander of the Flagship of Navy Medicine.

Senator INOUYE. Thank you very much.

General Brannon.

General BRANNON. Yes, Mr. Chairman, Senator Inouye. It is certainly a privilege and a pleasure to be invited back to testify again this year as the Air Force Assistant Surgeon General for Nursing Services, and this year I am also the very proud commander of the 89th Medical Group at Andrews Air Force Base, and certainly honored to be the first Air Force Nurse Corps officer to command a medical center.

RECRUITING

Now, I am going to speak on behalf of all the corps chiefs when I talk about recruiting, which we had identified last year as a significant challenge. This year that challenge has continued to grow for all of us. Nursing is a very rewarding profession, but with the many career options people have today it is not very popular with our young adults. So while the demand for nurses in America continues to grow, the supply is dwindling. It is projected that registered nurse positions will increase 23 percent over the next 5 years and yet baccalaureate nursing programs have had declining enrollments for 6 consecutive years.

Our nurse work force is also aging. The average age of a registered nurse in the United States is 45.2 years. We also see that 50 percent of our current nursing work force will be retirement eligible—that is age 65—in 2015. These trends have had a dramatic impact on the Army Nurse Corps. Reserve Officer Training Corps is their primary accession source, and as the school enrollments have decreased so have the scholarship requests, and they are down about 50 percent.

NURSING SHORTAGE

The Army Recruiting Command has been able to make up a significant part of this shortfall. However, direct accessions of nurses over age 40 has become increasingly common in the Army. What this creates is an older, limited term, non-career work force for them.

The Navy Nurse Corps has been fortunate to meet their recruiting goals for the past 10 years and pipeline programs that they first established in the early eighties have been the key to their success. While their recruiting goal is 290 nurses this year, they are only looking for 100 through direct accessions. The remainder will come from ROTC, medical enlisted commissioning, and nurse candidate programs.

The Air Force Nurse Corps is experiencing our third consecutive year of potential recruiting shortfall. Now, our needs are somewhat different from the Navy and the Army. Our initial accession goal is higher and we also have a much greater need for nurses who already have some experience. That is because outpatient clinics comprise about 65 percent of our current Air Force military treatment facilities, and most of them do not afford that hands-on skill that those brand new novice nurses need.

Last year, in order to work on this problem we increased the training capacity in all of our bedded facilities and we also broadened the definition of the fully qualified nurses we needed to access. We now include those who have a year of outpatient nursing experience in addition to inpatient experience. We have commissioned more enlisted members who have earned their baccalaureate degrees in nursing and we also doubled our number of ROTC scholarships.

MILITARY BONUS SYSTEM

While each of these strategies has had some impact, I fear we will still fall far short of our goal this year. We all agree that the nurse accession bonus is critical for recruiting in today's environment. But the civilian world has upped the ante. To attract new nurses, health care organizations in many parts of our country are offering larger bonuses, more robust benefit packages, and also nursing scholarships in some cases. We will continue to work with our sister services to evaluate the effectiveness of our current military bonus system.

We have a lot of challenges—nurse recruiting, nurse retention, implementing TRICARE for Life. But military nursing is still a great way of life. We are on the leading edge of health care and we are making population health a reality for all of our patients. Our nurse-managed clinics and our telephone nursing initiatives provide great support to our families.

Last year we recognized the need to standardize telephone nursing practice and we have really improved this service by deploying new policies and new training programs. We also have a nurse triage demonstration project under way that was funded by the Tri-Service Nursing Research Program. The objective is to develop more effective and efficient procedures.

Last year I described the Air Force's commitment to optimize the vast potential of our enlisted members. Since then we have made our technicians pivotal members in our primary care teams. They enhance the quality of each patient visit by performing initial screening, identifying preventive health needs, and also providing patient counseling and education. We have also made amazing progress in our initiative to increase the number of licensed practical nurses in our enlisted force, and we have gone from concept to students in the classroom in less than a year. Our first class of 23 students will graduate from an accelerated civilian program in June.

READINESS

Now, although many of our efforts have concentrated on peacetime health care, readiness remains job one. Our Air Force nursing

motto is "Global Nursing, Precision Care," and it reflects our commitment to our patients and to our Nation. Military nursing stands ready to respond any time, anywhere, in peace or in war.

I think a great example of this was our joint participation in MedFlag 2000. That was a State Department-sponsored humanitarian effort in Cameroon, West Africa. I was able to visit one of those villages during the deployment. I got to see our medics in action as they immunized over 19,000 African children to protect them from meningitis. I truly will never forget the looks on the faces of those African mothers, because they stood in line for many hours, but they recognized that our care could make a difference between life and death for their children.

NURSING TRAINING

Nursing is critical to the success of our Nation's partnership in peace initiatives and other contingency operations. Research is also vital to readiness. Your enduring support of the Tri-Service Nursing Research Program enabled nurses at Wilford Hall Medical Center to validate deployment readiness of our Air Force nurses. They used web-based training programs in a simulation laboratory to assess 200 nurses, and their study will help us determine the training frequency required to maintain critical wartime skills.

PREPARED STATEMENT

Mr. Chairman and distinguished members of the committee, on behalf of my colleagues I really thank you for allowing me to share some of the achievements and the challenges of military nursing. We are very grateful for your enduring and tremendous support.

[The statement follows:]

PREPARED STATEMENT OF BRIGADIER GENERAL BARBARA C. BRANNON

Mr. Chairman and distinguished members of the committee, I am Brigadier General Barbara Brannon, Director of Air Force Nursing Services and Commander of Malcolm Grow Medical Center at Andrews Air Force Base. It is an honor and privilege to represent today the 19,000 dedicated members of the active and reserve components of Air Force Nursing Services. Thank you for this opportunity to report on our achievements and challenges, and for your continued advocacy and support of our many endeavors. My comments will focus on recruiting and retention, nursing leadership and optimization, readiness, and research.

Recruiting

The national nursing shortage is having a devastating effect on staffing throughout the healthcare industry, and the Air Force Medical Service is no exception. For the third consecutive year, we are experiencing shortfalls in accessions. We were 85 nurses, or 30 percent, short of our nurse recruiting goal in fiscal year 1999. In spite of revising the goal last year from 300 to a "remotely achievable" 225, only 205 new nurses joined the Air Force in fiscal year 2000 by direct commissioning. Unfortunately, current reports project an even more serious shortfall of nurses this year.

This is despite several initiatives implemented during the past year to enhance recruitment. We changed the operational definition of a "fully qualified nurse" to include those with one year of outpatient nursing, as opposed to only accepting those with inpatient acute care experience. The Air Education and Training Command redesigned the Nurse Transition Program and we increased training capacity at our larger inpatient facilities that enabled us to recruit nurses with no experience for the first time in over three years. We also commissioned twice the number (from 12 to 23) of enlisted members who had earned their baccalaureate degree in nursing by removing the cap on that accession source. The number of ROTC scholarships doubled to 50 from the original goal of 25 set three years ago. Anticipating a severe shortage of Certified Registered Nurse Anesthetists, we instituted, for the first time ever, a loan repayment program that grants reimbursement of education costs up

to $24,000. Innovative incentives like this are essential as we struggle to meet our recruiting goals in critical nursing specialties.

Other incentives designed to enhance our officer recruiting efforts have been discussed, but could not be supported last year by our sister services due to differences in our personnel management systems and our recruiting goals. One proposal was to change Department of Defense policy to reduce the minimum term of service from three years to two years. We believe this proposal would attract nurses not interested in a longer active duty commitment.

We would also like to evaluate the nurse accession bonus. It is our belief that the five thousand dollar accession bonus no longer competes favorably with the employment bonuses offered in the civilian market place. Newspaper advertisements and our recruiters tell us that some civilian hospitals offer as much as $10,000 in sign-on bonuses. We will continue to work with our sister services to find mutually acceptable legislative answers to the bonus question.

Retention

Our current end strength reflects our accession shortfalls, the final year of the Air Force Nurse Corps voluntary draw down program, and an unexpected increase in the separation of nurses after their initial active duty commitment. At the end of fiscal year 2000, there were 4,048 nurses on active duty, 165 nurses below our authorized endstrength. This is the first time in over a decade that we have been below endstrength.

I have directed that every nurse who voluntarily separates from the Air Force be interviewed by the Chief Nurse, or a senior Nurse Corps officer. The standardization of exit interviews will help identify the factors that are influencing our nurses to separate early from active duty military service. Trend analysis of information provided by the survey will potentially enable us to target both the timing and type of incentives needed to improve retention.

Retention of our enlisted members has also become a challenge. For example, the retention goal for first term medics is 55 percent. Last fiscal year, the medical technician retention rate was 51 percent, the lowest in seven years. Retention among career enlisted members, those with ten to fourteen years in service, was also below goal. A selective reenlistment bonus was instituted to improve the declining retention for our first termers. Little improvement has been noted, with the January 2001 reenlistment rate for first term medical technicians at only 43.9 percent.

Quality of life issues, including child care, housing, benefits, and workload, is often cited as a major factor when our people make career decisions. Continued congressional support of legislation that focuses on improving military quality of life will bolster recruiting and retention of our officer and enlisted forces.

Nursing Leadership Opportunities

The Air Force has a solid progressive leadership track, and nurses as commanders are no longer a novelty. I am very proud to be the first Nurse Corps officer selected to command an Air Force medical center. Active duty nurses now command 22 percent of our medical groups. Thirty-one Nurse Corps colonels met the most recent Medical Commander Selection Board. Forty-two percent were identified as command candidates, and of those 13 nurses, 6 were selected for group command. Compared to the previous year, the selection rate increased 12 percent and the match rate decreased 8 percent.

Active duty nurses currently command 19 percent of our squadrons. On the last selection board, 39 nurses were identified as squadron command candidates and comprised 24 percent of all AFMS candidates. Twenty-two nurses were selected as squadron commanders and filled 25 percent of the requirements. Nurses command 32 percent of the Air Reserve medical squadrons and 13 percent of Air National Guard medical squadrons, representing a 3 percent increase for the Air Reserve and a 2 percent decrease for the Guard.

Nursing Optimization

Air Force nurses are also on the leading edge in the implementation of new health delivery models. Primary Care Optimization, and its overarching strategy of population health management, remains the focus of our peacetime health care system. Although challenges are great, we enjoyed many successes this past year. I am as excited about the role of the Health Care Integrator this year, as when I spoke of it in last year's testimony. These nurses work at the facility level as "air traffic controllers," ensuring our patients get the right care at the right time, from the right provider. Prevention and disease management are essential ingredients of the health care integrator function. For example, the Health Care Integrator at Tyndall Air Force Base in Florida managed the follow-up care of over 800 patients seen in local civilian emergency departments. By returning these patients to the military

treatment facility, the nurse ensured continuity of care and reduced costs per patient by eliminating duplication in services. As this role continues to evolve across our health system, I am optimistic that there will be even greater improvement in services and higher cost-savings.

Another success story revolves around telephone nursing practice, telehealth that is based on a philosophy committed to the goals of delivering quality, cost effective, and safe nursing care. Our nurses in our outpatient clinics reported in a recent survey that 50 to 60 percent of their duty time was spent providing telephone support to patients, assisting them in meeting their health care needs. This is equivalent to the time our civilian counterparts report that they spend in the same activities. Our nurses use the telephone to triage, educate, and coordinate care for patients.

Because of the amount of time spent on the telephone, there was a demand to standardize Air Force telephone nursing practice. We developed guidelines, training materials, and other support tools that were deployed to the field late last year. This tool kit was well received and stimulated improvements throughout the Air Force Medical Service. In addition, we are conducting a triage demonstration project to evaluate access to care, clinical outcomes, patient and staff satisfaction, and required resources. This project is funded through the TriService Nursing Research Program. Although the demonstration is just underway, there are early lessons learned to validate that support of nurses in the triage function was much needed. I look forward to reporting our results next year.

We have also made great strides in optimizing the role of our enlisted members providing patient care services. As a result of Primary Care Optimization, our enlisted personnel have become pivotal members of the healthcare team. They are responsible for initial patient screening, identification of preventive health needs, and many aspects of patient counseling and education. Their work improves the quality of the patient visit by enhancing the efficiency of the physicians, nurse practitioners, and physician assistants.

Last year I spoke of the vast untapped potential of our enlisted force. We have made great progress in our initiative to increase the number of Licensed Practical Nurses in our skill mix. We entered a partnership with a civilian college and our first class of 23 students are now attending an accelerated program to earn a practical nurse certificate.

Much work was done this past year to develop an inpatient staffing model to correct the skill mix imbalance prevalent in our bedded facilities. The goal is to ensure the patient receives the right level of care from the appropriate nursing staff member. The model was field-tested last summer and the new standards were applied in the fiscal year 2003 manpower programming cycle.

We are now focused on developing new staffing models for our specialty services. Advanced practice nurses can play a critical role as we expand population health and condition management programs. We believe that increasing the number of advanced practice nurses in ambulatory care settings will increase access to care, improve patient satisfaction, and enhance the efficiency and effectiveness of our health care delivery.

Deployment of "TRICARE for Life" will also present another opportunity to capitalize on the talents of nursing personnel. We are delighted that we may be given the opportunity to welcome our over-age 65 retirees and their families back to our healthcare facilities. It is absolutely the right thing to do, and will also allow our people to practice the full scope of nursing, and maintain those skills critical to our medical readiness.

Readiness

We are at the nation's call and must be prepared to respond any time anywhere. We capitalize on every opportunity to sustain top clinical skills and to gain experience in a variety of settings. Two hundred Air Force medics participated in MEDFLAG 2000, a United States European Command (USEUCM) three week medical readiness exercise in Cameroon, West Africa. The 86th Aerospace Expeditionary Group, from Ramstein Air Force Base, Germany, was the lead agency of the joint team that also included medical personnel from the Army and the Navy. I made a personal visit to one village and witnessed our medics in action as they conducted a massive immunization campaign protecting over 19,000 African children from meningitis. I will always remember those parents who patiently waited in line for hours, knowing that our help could mean the difference between life and death for their children. Nursing is critical to the success of our nation's "Partnership for Peace" missions.

In Southeast Asia, our Independent Duty Medical Technicians (IDMT) supported Joint Task Force Full Accounting, a mission to search for and recover remains of Americans Missing In Action. Our IDMTs also deployed to the Federated States of

Micronesia in support of civil engineering teams, and provided immunizations and routine medical care to the local population. These contingency operations help our people gain new skills and sustain clinical competencies essential for medical readiness.

Research

The continued support of the TriService Nursing Research Program enabled us to study military nursing practice models and new technologies in the patient care environment. Nurses at Wilford Hall Medical Center in San Antonio, Texas, conducted research on wartime nursing competencies. This initiative used a web-based computer assisted training program and an innovative simulation laboratory to verify the readiness skills of over 200 clinical nurses. A key outcome of this study is the validation of the training frequency required to sustain necessary skills.

We also received a grant from the TriService Nursing Research Program that will help us deploy "Medical Team Management" throughout the Air Force Medical Service. Using the aviation crew resource management concept well-known to our flying community, a team at Eglin Air Force Base, Florida, designed a program to improve patient safety by enhancing communication and collaboration between nursing staff and other healthcare disciplines. During the past year, over 1,500 Air Force medics were introduced to the elements critical to building a successful safety culture. The initiative also produced a Hospital Safety Index to measure staff attitudes toward patient safety. Analysis of preliminary data is pending.

Closing remarks

Mr. Chairman and distinguished members of the Committee, it has been a pleasure to share the most recent chapter of our Air Force Nursing story with you today. Our motto, "Global Nursing, Precision Care", reflects our commitment to our nation and our patients, in peacetime and in war. We thank you for your tremendous support of military nursing.

Senator STEVENS. Thank you very much.

General Bester.

General BESTER. Mr. Chairman, Senator Inouye, it is indeed a pleasure for me to be asked to come here today to testify.

Over the last year, all three of us nursing chiefs have worked very closely on issues that affect all three of the services. Today what I would like to discuss primarily is the manning issue, both military and civilian. Last year, you will recall, all the armed services stressed the need for continued incentives to attract and retain military members in light of the present and the projected future nursing shortages. The need for incentives to retain military nurses remains critical.

According to a policy statement from the Tri-Council of Nursing Organizations—and that is comprised of the American Association of the Colleges of Nursing, the American Nurses Association, the American Organization of Nurse Executives, and the National League for Nursing—today's nursing shortage is very real and very different from any experienced in the past. The new nursing shortage is evidenced by fewer nurses entering the work force, acute nursing shortages in certain geographic areas, and a shortage of nurses adequately prepared to meet certain areas of patient care needs in a changing health care environment.

Enrollments in all basic register nurse (RN) preparation programs have declined each year for the last 5 consecutive years. According to the National League for Nursing, between 1995 and 1999 the number of nursing programs of all types actually increased in the United States by 2.6 percent. Despite this overall growth in the number of nursing programs, the number of students enrolled and graduating from nursing programs has actually declined 13.6 percent. The clear trend is toward an increase in the

number of programs occurring simultaneously with a decrease in the number of enrollments and graduations from these programs.

Currently our greatest retention challenge is at the lieutenant and captain level, the 01 through 03 level, which really is the heart of the military work force for all the services. Each of the services has targeted this group through open communication and via interviews with upper level management to ascertain the reasons the junior officers depart the military. We are closely monitoring this group and working those retention issues that are within our power to effect change and resolution.

Last month the Army Nurse Corps hosted the Charles J. Ready Leader Development Conference. That conference is designed to develop and mentor future nursing leaders from all three of our services. Participants address critical issues affecting their development as military nurses.

SPECIALTY NURSING

Most appropriate to today's environment was answering the key question: Why are the mid-level officers leaving the military today? The service chiefs received a very powerful message from them. In addition to quality of life issues, participants made it clear that educational opportunities and pay and incentives were a top priority to them. Current civilian sign-on bonuses, flexible work schedules, compensation packages and benefits are attractive alternatives to our cost-cutting environment.

The reality is that the competition with the civilian nursing market has increased dramatically over the last few years. Continued erosion in our health education and training budgets for our military nurses adversely impact our ability to provide the professional development necessary to prepare our officers for the rigors of senior leadership and advanced nursing practice.

I am happy to report that we have been extremely successful over the past few years with specialty and certification pay for our nurse practitioners, our certified registered nurse anesthetists, and our certified nurse midwives. I would ask that we continue with additional economic incentives that are necessary to encourage military nurses to enter low-density specialty areas and remain in practice longer than the current 1-year post-training obligation.

Our civilian work force, comprising anywhere from 33 to 55 percent of our nursing force structure, presents equal challenges. Current vacancy rates range from 27 percent on the high range to 7 percent on the low range. Coupled with costly 15 to 35 percent turnover rates and significant differences in hiring practices between the government and the private sectors, we are unable to maintain an adequate level of civilian nurses to meet our needs.

Our civilian competitors are able to provide timely hiring actions, in some instances as little as one week from application to the first day they arrive in the facility. Conversely, the average length of time to bring a new RN into a military treatment facility is 93 days. Civilian hiring practices constrain and entangle what should be an expeditious process for us.

We have all worked diligently here at the front table to overcome these barriers through innovative practices. The Army Nurse Corps has partnered with the Air Force, utilizing Air Force nurses to tem-

porarily fill civilian vacancies until hiring actions are completed. The Navy similarly has used extensive resource-sharing agreements and contracts to meet their needs.

Teams of civilian and military leaders have met to discuss ways to streamline civilian recruitment and hiring processes and identify sorely needed revisions in outdated civilian standards to assist us in meeting our current needs. We must create a system that is not cumbersome and one that does not threaten human resource availability. We must have the funding to develop and implement accession programs that meet the current critical need for swift hiring of highly qualified candidates and to continue to develop an effective career progression ladder for them.

Funding civilian training and incentive programs that enhance professional development, leadership skills, and work force productivity is absolutely essential. With the passage of the 2001 National Defense Authorization Act that expands, of course, our health care to a greater number of our beneficiaries, the numbers of beneficiaries enrolled in our military health care facilities is expected to rise, as is the severity of illness of those patients. The increased demand for health services, the aging of the population, and the need to maintain the appropriate mix of patients necessary to maintain both our clinical proficiencies and our readiness posture mandate that we have sufficient nurses to provide these much needed health care services. We must act expeditiously in order to allow us to continue to adequately support this critical patient care mission.

PREPARED STATEMENT

In closing, I want to thank you, Mr. Chairman, Senator Inouye, for the opportunity to address these critical issues with you. We are all at this table very, very grateful for your assistance in keeping our military nursing corps strong and ready for the challenges that face us in the future.

Thank you.

[The statement follows:]

PREPARED STATEMENT OF BRIGADIER GENERAL WILLIAM T. BESTER

Mr. Chairman and distinguished members of the committee, I am Brigadier General William T. Bester, Assistant Surgeon General for Force Projection and Chief, Army Nurse Corps. I am both pleased and honored to testify before you today. I look upon my appointment as the 21st Chief of the Army Nurse Corps as both an honor and a privilege. The opportunity to serve with and direct some of the finest men and women in the Army Medical Department (AMEDD) is a professional reward that far surpasses anything that I could have thought possible some twenty-seven years ago when I first joined this outstanding professional nursing organization. I have an absolute commitment to serve the Army Nurse Corps with the same tenacious spirit of my predecessors.

In that same context, I stand committed to fully support The Army Surgeon General in his quest to maintain our high quality of peacetime healthcare while, at the same time, being trained, equipped and capable of supporting the medical needs of our deployed forces. In an environment of limited resources, he has charged me to be actively engaged in our corporate business plans that will allow us to generate the greatest benefit from the resources, both human and fiscal, that we have available to us.

This morning my focus will highlight three important concerns that relate to the ability of the Army Nurse Corps to serve the nation: manning, the impact of operational deployments and the importance of the congressionally sponsored TriService Nursing Research Program. I would first like to begin by discussing manning.

Manning: The demand for professional nurses in America is increasing while the supply of professional nurses is declining; according to a policy statement from Tri-Council members, The American Association of Colleges of Nursing (AACN), The American Nurses Association (ANA), and The American Organization of Nurse Executives (AONE) dated 31 January 2001. Last year, you will recall, all armed services stressed the need for continued incentives to attract and retain military members in light of the present and future nursing shortages. We greatly appreciate the Senate directing the Health Professionals Retention/Accession Incentives Study (HPRAIS), currently being conducted by the Center for Naval Analyses (CNA), that is evaluating the adequacy of special pays and bonuses for military health care professionals. We are hopeful that this study will identify the need for incentives for both our military nurse force and our Department of Army (DA) civilian nurse workforce.

The Bureau of Labor Statistics reports that Registered Nurse positions will increase 23 percent by 2006. According to the policy statement form the Tri-Council members, AACN, ANA, and AONE, enrollments in all basic RN preparation programs have declined each year for the last five consecutive years. According to the National League for Nursing (NLN), between 1995 and 1999, the number of programs of most types has increased in the United States 2.6 percent. Despite this overall growth, the number of students enrolled in and graduating from nursing programs has declined 13.6 percent. The clear trend is toward an increase in the number of programs occurring simultaneously with a decrease in the number of enrollments and graduations from these programs. For the fourth year in a row, Bachelor of Science in Nursing (BSN) enrollments are down 5 percent. Attractive, competing career options with greater compensation are luring young adults away from nursing as a career choice. To compound the shortage, the current workforce of civilian nurses is rapidly approaching retirement age. The average age of civilian RNs is 45.1 years. By 2010 it is estimated that more than 40 percent of the nursing workforce will be over the age of 50 and by 2015 approximately 50 percent of the nursing workforce will be retirement eligible.

These trends—decreased nursing school enrollments and an aging workforce—have a dramatic impact on our ability to attract and retain qualified military and civilian nurses. In the early 1990's our Corps made a commitment to use the Reserve Officers' Training Corps (ROTC) as our main source of accessions. With the nursing shortage of the last three years however, we have seen a decline in scholarship requests and our ROTC accession numbers have decreased 50 percent, from a high of 228 in 1996 to a projected low of 113 for 2001. Although U.S. Army Recruiting Command (USAREC) has made up a significant part of this shortfall, direct accessions of nurses aged 40 years and over have become much more common. This creates an older, limited-term, non-career track force. This approach further shrinks our already eroding mid- and late-career captain and major ranks that supply the majority of our expert clinical specialty base. Having to recruit a greater number of working nurses means we must compete with the civilian institutions for the same critical specialties at a time when they are offering streamlined hiring practices and significant recruitment and retention bonuses. Furthermore, continued erosions in our health education and training budgets for our military nurses adversely impact our ability to provide the professional development necessary to prepare our officers for the rigors of senior leadership and advanced practice. Our junior officers look to these educational offerings as a means to advancement and a critical motivator for retention.

Our civilian ranks present a more acute dilemma. Within our current AMEDD nursing structure approximately 50 percent of nursing care is provided by Department of Army (DA) civilian nurses. Over the last three years our inventory has not met the level of need. The reasons are varied. Current vacancy rates for authorized positions vary by region from a high of 27 percent to a low of 7 percent. Coupled with costly 15 percent to 35 percent turnover rates and significant differences in hiring practices between the government and private sector, expeditious hiring is tenuous at best. The average processing time from application to hiring is 93 days.

Much has been done to alleviate current and future shortages. Recruitment bonuses and specialty course guarantees continue to attract nurses to the military. The Army Nurse Corps has partnered with the Air Force utilizing Air Force nurses to temporarily fill civilian vacancies until hiring actions are completed. Army civilian and military leaders are exploring ways to streamline civilian recruitment and hiring processes. Further action and support are needed if we are to develop a responsive hiring system.

Several key initiatives must be realized to ensure that a robust force of civilian and military nurses is available to care for our ever-increasing number of beneficiaries seeking care at our Army Medical Treatment Facilities. Achieving recruit-

ing goals at the entry level and retention past initial and subsequent tours is of great concern. The success of recruitment bonuses proved its worth and now must be expanded to retention bonuses for officers completing their first tour. Furthermore, economic incentives are necessary to encourage military nurses to enter specialty areas and remain in practice longer than the current one-year post-training obligation. The current specialty and certification pay for our nurse practitioners, certified nurse anesthetists, and certified nurse midwives, demonstrates the success of such initiatives.

Even greater efforts must be dedicated to achieving dramatic improvements in our civilian recruitment and retention initiatives. Government hiring practices are archaic, cumbersome, and threaten human resource availability. Wages are set by law and not easily adapted to market forces. We must have the flexibility to develop and implement accession programs that meet the current critical need for the swift hiring of highly qualified candidates. Funding civilian training and incentive programs that enhance professional development, leadership, and work force productivity, such as the revision of the Army Civilian Training Education Document System and civilian tuition assistance programs, are a must. We ask this committee to support necessary changes to simplify or eliminate outmoded hiring rules and produce a modern, streamlined personnel system, one that is more responsive to our needs.

Making such changes now will enable the military treatment facilities to execute innovative business plans designed to provide for the preventive, acute, and chronic health care needs of its beneficiaries. With the passage of the 2001 National Defense Authorization Act expanding health care for a greater number of beneficiaries, the numbers of beneficiaries enrolled in our military health care facilities is expected to rise, as is the severity of illness of our patients. The increased demand for health services, aging of the population, and the need to maintain the appropriate "mix" of patients necessary to maintain our clinical proficiency and readiness, mandate that we have sufficient nurses to provide health care services. We must act expeditiously in order to allow us to continue to adequately support this critical patient care mission.

Deployments: In an environment of persistent personnel shortages, Army Nurses continue to provide services around the world whenever and wherever they are needed. In fiscal year 2000, 444 Army Nurse Corps Officers deployed to over 10 countries consuming 12,116 man-days not available to deliver the TRICARE benefit. For fiscal year 2001 we are on a glidepath to exceed that amount by 23 percent, with 227 Army Nurses who have already deployed, consuming 6955 man-days.

Army nurses continue their expert performance in support of the worldwide missions. During the 6-month deployment of the 212th Mobile Army Surgical Hospital (MASH) to Bosnia, Army nursing personnel were responsible for daily health support to over 10,000 Kosovo Force 4 (KFOR) soldiers and emergent care for over 250,000 local nationals. These personnel provided direct care to over 339 trauma and major medical patients, including victims of motor vehicle accidents, gunshot wounds, and grenade and mine blast injuries. In the course of providing host nation medical support, the 212th MASH's medical and nursing staff provided weekly visits to the rural town of Gnjilane to instruct the local hospital staff in basic and emergency medical care. Their efforts significantly increased the host nations' ability to provide competent regional healthcare. Shortly after their arrival at Eagle Base in Bosnia, the 249th General Hospital's (Forward) nursing personnel actively collaborated in establishing a telemedicine link with four isolated base camp aid stations establishing weekly telemedicine conferences. Such conferences significantly reduced numbers of evacuated patients through prompt diagnoses and treatment and increased unit level education for division medics. Task Force Med Eagle received recognition as a Training Site for the National Registry for Emergency Medical Technicians. This site now facilitates the 91W transition training for all follow-on units. This action has far reaching implications, ensuring that up-to-date combat medic training and enlisted professional career development continues, even when our soldiers are deployed. The 67th Combat Support Hospital was instrumental in rebuilding a local hospital and educating the local national staff, ensuring its ability to treat trauma patients. Additionally, in just 3 months, this unit volunteered countless hours to repair a badly damaged local school void of heat, electricity, water, and functional classrooms, and stock it with donated school supplies from Germany and the United States. While participating in Joint Task Force Bravo in Honduras, US military nursing personnel and Honduran military personnel conducted a comprehensive Health Project at the Honduran Department of Defense in Tegucigalpa. This activity enhanced international medical cooperation between Honduran and American armed forces through education, information sharing, and interdisciplinary collaboration.

Not only are our active duty Army Nurse Corps Officers fully engaged, but our reserve family is in full support of our deployed forces as well. In August of 2000, the 914th Combat Support Hospital from Backlick, Ohio traveled to the southwestern valleys of Columbia, South America for a 15-day Medical Readiness Training Exercise. During the 10 days the clinics were in operation, the staff treated over 6,400 patients. Currently the 313th Combat Support Hospital (Hospital Unit Surgical), from Springfield, Missouri is staffing Task Force Med Falcon in Kosovo, continuing to provide quality healthcare to the approximately 10,000 NATO soldiers in the sector.

These few examples serve to highlight once again that Army Nurses possess the expert clinical skills, critical thinking abilities and dedication necessary to execute the most challenging mission in the most austere of environments, never compromising patient care.

Nursing Research: Thanks to your continued support, the TriService Nursing Research Program (TSNRP) continues to increase our understanding of the most critical issues facing the delivery of military nursing care today. One example is the staffing shortages mentioned earlier in the testimony and their current impact on our ability to deliver timely and quality nursing care. With the aid of TriService Nursing Research funding, Army nurse researchers are working with experts from the California Nursing Outcomes Coalition and the University of California, San Francisco to establish an Army-wide nursing database that uses standard definitions and data extraction techniques to measure patient outcomes. The Army nursing Outcomes Database will be used in three key ways. First, participating MTFs will use the data for internal quality improvement efforts. Second, the data will provide a foundation for research and other systematic studies assessing the impact of skill mix, educational level, and other factors on indicators of health, quality and safety. Third, data will be used to make evidence-based Army health care policy decisions that affect patient safety, educational planning, health systems design, and nurse staffing. This year I provided direction to Army nurse researchers to reprioritize nursing research programs within the Army Medical Department. These programs will focus on the most compelling problems over which we have an ability to influence outcomes. Among these are: (1) identification of specialized clinical skill competency training and sustainment requirements; (2) deployment health challenges (nursing care requirements during current mobilization and operations other-than-war situations); (3) issues related to the nursing care of our beneficiaries in garrison; (4) identification of acute care nurse staffing requirements and their relationship to patient outcomes; (5) issues related to civilian and military nurse retention in this era of critical shortages;) and finally, (6) program evaluation of our core education programs for nursing personnel. I am confident that Army Nurse researchers will continue to add to the scientific body of knowledge underlying military nursing practice.

Your support of the TriService Nursing Research Program is fundamental to the success of military nursing research. I would like to share some brief examples of our successes. In a series of TriService Nursing Research funded studies, two self-diagnosis kits were developed that can accurately determine the presence of vaginal or urinary tract infections in deployed female soldiers. These kits will allow self-diagnosis and treatment. Implications for military women deployed in austere environments include less time away from duty, increased manpower availability for mission-related operations, and greater health and comfort levels.

Research not only answers questions; it frequently uncovers gaps in what we know. In a study evaluating intravenous catheter insertion by nursing personnel wearing chemical-biological protective gear, nurse researchers discovered that some personnel encountered difficulties with task completion due to claustrophobia associated with the confinement of the protective clothing. Based on this finding, further study will address this issue in an attempt to find the means to improve nurses' performance in the chem-bio environment.

The TriService Research Advisory Group, fully supported by all Federal Nursing Chiefs, has developed a strategic plan that prioritizes the most critical and relevant topics for future military nursing research. These topics include: (1) deployment health—studies that analyze factors that affect operational readiness before, during, and after deployment; (2) development and sustainment of skills—studies that address the acquisition and maintenance of key nursing competencies; (3) clinical practice outcomes management—studies that determine the most effective health care interventions across the full spectrum of care from health promotion to disease management in military populations; (4) recruitment and retention—studies that identify strategies to improve force management of military and civilian nurses within the Department of Defense (DOD); and (5) clinical resource management—studies

that determine staffing models that optimize the utilization of DOD nursing personnel.

Military nurses are ever vigilant of the health care needs of those we serve. We possess a unique understanding and knowledge to provide the care required by our beneficiaries. Continued congressional support for the TriService Nursing Research Program is essential for military nurse researchers to conduct studies to improve practice and develop policy within the DOD.

Army Nurses are a key spoke in the wheel of Army Medicine. Collaboration with our sister Corps within the Army Medical Department will insure that we capitalize on every opportunity to support The Army Surgeon General's vision of providing the highest quality of patient care predicated on evidenced-based practice and business plans that utilize our fiscal and human resources in the most efficient and effective way possible.

Finally, I would like to express my unqualified support of the Uniformed Services University of the Health Sciences (USUHS). The Graduate School of Nursing has been instrumental in providing trained Certified Registered Nurse Anesthetists and Family Nurse Practitioners. Most importantly, USUHS has become the sole educator of our Family Nurse Practitioners, saving the Army Medical Department in excess of $300,000.00 annually in Health Education Funds. Graduates of the USUHS programs have excelled masterfully and have enjoyed a 100 percent pass rate on their certification exams. Our continued affiliation with USUHS is a must if we are to maintain sufficient numbers of practitioners necessary to support our primary care mission.

In a closing note, on February 2, 2001, the Army Nurse Corps celebrated 100 years of nursing service to our country. Army Nurses reflected on our illustrious past and applauded our accomplishments of service to our soldiers. Now we are poised and ready to address the challenges of the future, with the same drive, professionalism and dedication as our predecessors. We will be successful. Army Nurses remain Ready, Caring, and Proud. Thank you for this opportunity to address Army Nursing. We are grateful for your assistance in keeping the force strong for the future.

Senator INOUYE. I thank you very much, General Bester, and congratulations on your new mission.

General BESTER. Thank you, sir.

Senator INOUYE. May I proceed?

Senator STEVENS. Yes.

PROCESSING APPLICATIONS

Senator INOUYE. General Bester, you have noted that it takes an average of 93 days to process applications for new nursing positions. Who is responsible for processing civilian nursing applications, your offices or some other organization?

General BESTER. No, sir, our civilian personnel challenges. There are a number of steps in the process and we have blocked those steps with our folks and we are trying to decrease the processing time, which by the way, sir, we have decreased some already since we have started addressing the issue.

But it really needs to come down much more than it already has, because what happens is is we get very interested applicants. Let me use Brooke Army Medical Center down in San Antonio for a recent example. We had a job fair down there and had 100 very interested nurses who were interested in working at that beautiful health care facility that we have. The issue is that the processing time was so long that they took other offers downtown, not so much because they were being offered any more money, which they may have been, but they were really interested in working at Brooke Army Medical Center, but they were not interested in waiting 2, 3, or 4 months to be processed.

Senator INOUYE. Why did it take so long?

General BESTER. We have, sir, built-in obstacles in our hiring system that just prevent us from expeditiously bringing people on into our civilian nursing system.

Senator INOUYE. Who is responsible for the hiring of nurses?

General BESTER. Our civilian——

Senator INOUYE. Your office?

General BESTER. No, sir. We identify the individuals that we want hired, but we have to go through the civilian personnel office to hire those individuals.

Senator INOUYE. Would it make a difference if you got the responsibility?

General BESTER. Yes, sir.

Senator INOUYE. Would the others feel the same way?

Admiral MARTIN. Yes, sir.

General BRANNON. Yes, sir.

Senator INOUYE. So right now you depend upon another office, which is not in your profession, to do the recruiting?

Admiral MARTIN. Yes, sir, for civil service personnel the Office of Personnel Management (OPM) recruits and hires all these individuals.

Senator STEVENS. What about uniformed people?

Admiral MARTIN. No, sir, we do that.

General BRANNON. We do that.

Senator STEVENS. You do it directly?

Admiral MARTIN. Each service has some type of a recruiting command where we actually have active duty nurses participating.

Senator STEVENS. He is asking, are you doing it? You recruit your own people?

Admiral MARTIN. Yes, sir.

Senator INOUYE. But not the civilians?

Admiral MARTIN. No, sir.

Senator INOUYE. If you had the authority to recruit civilian nurses, it would be done much more expeditiously, would it not?

Admiral MARTIN. Yes, sir.

Senator INOUYE. Would the surgeons general oppose this?

General CARLTON. No, sir. We support it fully.

Senator INOUYE. You support it.

Senator STEVENS. We will have to discuss that with the Government Affairs Committee, but I understand you are interested.

CERTIFIED REGISTERED NURSE ANESTHETISTS (CRNA)

Senator INOUYE. How successful has the Army, Navy, and Air Force Nurse Corps been in retaining the USUHS Graduate School of Nursing advanced practice nurses?

NURSE ANESTHETISTS

General BRANNON. I think we struggle a little bit, sir, with retaining our certified registered nurse anesthetists. Many of them will retire, but often they do not stay past their 20-year obligation because of the compensation benefits in the civilian world. But that school has been very successful in producing full-up, readiness-ready CRNA's who perform outstanding service while they are with us.

Senator INOUYE. All of them—I gather you have a 100 percent pass rate?

General BRANNON. Absolutely. We are very proud of that quality education, sir.

Senator INOUYE. It is the only nursing school that has done that in this Nation.

One of the problems we seem to have from underfunding, as noted by the surgeon generals, is the fact that we have to either postpone or cut back programs as we get close to the end of the fiscal year. One program that suffers every fiscal year is the continuing education program. Has that affected the nursing profession in your experience?

Admiral MARTIN. Yes, sir, it has. As our dollars become tighter, we then cut down on sending nurses to professional education programs, certification programs, and so forth. You need to continuously train and send professionals to either challenging courses or updates for professional education.

Senator INOUYE. Do you have common problems, for example, in recruiting active duty personnel? In the Air Force do you find it a bit easier recruiting than the Army? Do the services find that women would rather go into the Army or the Air Force or the Navy?

General BESTER. Senator, I think they all want to come in the Army.

Admiral MARTIN. I believe they like our uniform better.

General BRANNON. They all want to be flight nurses.

We all have our advantages, I think, sir.

Senator INOUYE. Recently, General Bester, there was a revision in the Army regulations affecting the standard of practice for certified registered nurse anesthetists. How is that working out?

General BESTER. Sir, I can report that that is moving along very well. General Peake approved that revision last November, which is our Army Regulation 40–48, which really defines our scope of practice for CRNA's. What it really has done is codify the way we have been practicing anesthesia for a number of years now, and we have got that new revision implemented in most of our facilities. The last couple facilities that it will be coming on line here, it will be implemented there very soon.

So I can report to you that it is moving along very well, being supported by both the surgeon general and the Chief of the medical corps, Major General Kevin Kylie.

Senator INOUYE. Are the anesthesiologists satisfied?

General BESTER. Probably not every one, sir. But we are working the issues in particular institutions and I think we are working through the issue very well.

Senator INOUYE. Do you think that will have an impact on retention?

General BESTER. Retention for us, sir, for CRNA's? Yes, sir. I think the practice environment, that coupled with the $15,000 bonus that they currently get that you approved some years back, I think are the two factors that allowed us to come from about a 73 percent fill rate in the early nineties to where we currently are, which is over 90 percent fill in our CRNA positions, which is a really good news story.

FLIGHT NURSE TRAINING

Senator INOUYE. Is there a different type of training for a flight nurse as compared to an Army nurse?

General BRANNON. Well, flight nurse is an additional training and we send our nurses to a specific school that teaches them some of the physiological changes of flight and some of the nursing procedures and things that they need to know. So it's certainly a postgraduate training for that specific job. Not everyone gets to be a flight nurse, but we do have some opportunities for that.

Senator INOUYE. We have a situation where the Marines have no medical corps. What sort of arrangement does the nurses corps have with the Marines?

Admiral MARTIN. We have nurses that are assigned to various Marine Corps units right now throughout the world. We have quite a few nurses that are assigned with the Marines.

Senator INOUYE. Who is responsible for the training of the corpsmen in the Marines?

Admiral MARTIN. The corpsmen all go through a field medical program that is an established program before they go to the Marines. There are physicians working in the Marine battalions and detachments and there are also various nurses working with them as well to keep up their skills.

Senator INOUYE. Mr. Chairman, I have many other questions, but I would like to submit them to the surgeon generals and the nurses as well.

RECRUITING PROGRAMS

Senator STEVENS. We all recognize Senator Inouye's leadership in dealing with your services.

I do not have any questions, but I have two areas I would like to talk to you about. One, what kind of outreach do you have to the universities, the State universities, and other institutions that do graduate nurses? I ask that because one of the things that happened in my State is we found there are an overwhelming number of people that wanted to take the nurses' courses, but then they did not have any opportunity for employment, they have so few facilities in the State.

Do you really reach out to those universities for recruitment, like the other services do, in the early part of their training? What is the outreach that you have?

Admiral MARTIN. I can say for the Navy, we have Navy Nurse Corps recruiters assigned throughout the United States and they make it a point to visit all of the colleges and universities in their areas. When they have the various professional days and recruitment programs, they participate in those.

Senator STEVENS. They are your people or they are just Navy recruiters?

Admiral MARTIN. No, sir, they are Navy nurses.

Senator STEVENS. Do you do the same thing, General?

General BESTER. Yes, sir. We also have recruiters in every State and in Puerto Rico. We have Navy nurses assigned to the recruiting command and then we have recruiters that are identified specifically to the nurse recruiting mission.

General BRANNON. Ours is a little different and I think that is a problem, Senator Stevens. We do not have a lot of nurses actually assigned to primary recruiting responsibility where they are out making that interface with potential nurse recruits. They are often enlisted members or other corps. What we have done to try to fill that gap is I have written a letter to each recruiting service and volunteered my services and those of nurses in nearby facilities to go out and speak with groups. I speak at any national conference I can where I know there will be civilian nurses. I will be going to the Student Nurse Association meeting and taking recruiters with me so we can potentially get out there.

But I think we would have an advantage if there were more nurses in the recruiting business for the Air Force.

Senator STEVENS. All right. Let us get just to our basic business here, which is money. Are you all caught up with the shortfall? Are you going to be part of that request for supplementals this year? Admiral?

Admiral MARTIN. Sir, that will all be a part of our proposed budget, yes, and we will be caught up in it.

Senator STEVENS. Your funds are included in moneys for the surgeon generals?

Admiral MARTIN. Yes, sir. Yes, sir.

Senator STEVENS. How extensive is your shortfall?

Admiral MARTIN. Would you like for me to speak as the Director of the Nurse Corps or as the commander of Bethesda?

Senator STEVENS. I would like for you just to tell me the truth.

Admiral MARTIN. Well, as the Director of the Nurse Corps, we do not put a direct price tag on all the education that goes on within all of our various facilities. So I do not fund that out of a central Nurse Corps fund. Each of our medical facility commanders funds the number of nurses that they have out of their direct health care dollars working right at their commands for any of their education.

Senator STEVENS. You do not get a budget and then you fulfill the needs for your service?

Admiral MARTIN. No, sir. That comes out of the command funds.

Senator STEVENS. Well, how do they treat you?

Admiral MARTIN. Pardon me?

Senator STEVENS. Are you getting your requests fulfilled?

Admiral MARTIN. Well, each of the nurses at the various commands, they go to their commanding officers to request funds for any type of programs and so forth. What we do look for as far as central funds is any type of bonuses that we request or augmentation of bonuses. Our school programs are funded out of the central command when we send individuals to various training programs, say to become certified nurse anesthetists or nurse practitioners.

VENTURE CAPITAL

General BESTER. Senator, if I may, I think along these lines, and what General Peake referred to a little bit earlier, is the venture capital issue when we are asking for these additional dollars is very, very important, because as we need additional nurses, for example, those come in the form of the business plans that General Peake referred to, and that venture capital up front will pay you

dividends down the road, but it might not be seen for a year or 2 years or 3 years down the road.

But it is absolutely essential that we get that venture capital, so we then can go up and purchase those nurses and work those increases with this increased benefit population that we are going to get via the National Defense Authorization Act.

Senator STEVENS. You do not get line item funding from us?

General BESTER. No, sir.

Admiral MARTIN. No, sir.

Senator STEVENS. Would you like to get it?

Admiral MARTIN. No, sir.

General BESTER. No, sir.

General BRANNON. I cannot separate what we do as nursing from what our medical service does. We are team members and all of our programs are really woven in with the total benefit. So I could provide more robust nursing services and support to patients, but if we did not provide those programs it would not really help very much.

I think the entire system needs to be resourced. We are certainly getting our fair share. However, it just is not adequate to progress as we would like.

Admiral MARTIN. For example, sir, as the commander of Bethesda I have a nursing shortage. I need civilian nurses to fill vacant billets right now. But I buy those out of my command funds. I pay for those positions, those nursing assets, out of my command funds, not out of a central Nurse Corps fund.

Senator STEVENS. I am worried about, and I think Senator Inouye is, too, about the word we are getting that there is a crisis in nurse staffing generally in the country. I assume that you are suffering from that as much as civilian hospitals are. If your recruiting is done by your own people, where do you get the payment for those? You say you send out people to do recruiting. It is not done by the medical corps, right?

General BESTER. We have authorized positions, though, sir, that are authorized into those slots. So we have been authorized the moneys in the military pay system to pay for those individuals who are on the recruiting command doing those jobs.

Senator STEVENS. Do you have a sufficient number? If recruiting is going down, I would like to find out what we do to build it up. Where do we put money to give you some additional boost in getting more people?

General BESTER. Sir, I think if we can funnel some moneys—we are going to continue to work hard, of course, in the recruiting effort for our active duty divisions. But if we can get the money that we have discussed here for our civilian nurses and if we can streamline that process, I think that that will answer the mail on a lot of the problems that we are currently having.

Senator STEVENS. What are the education requirements for you people to come in as just recruits, new recruits as nurses?

General BESTER. Baccalaureate degree.

Senator STEVENS. Same with you?

Admiral MARTIN. Yes, sir.

Senator STEVENS. Same with you?

General BRANNON. Yes, sir.

Senator STEVENS. Well, Senator, do you have anything further?

RESERVE OFFICER TRAINING CORPS

Senator INOUYE. I would like to follow up by asking a crazy question. When I was in high school I was in ROTC. I am certain, although we do not admit this matter publicly, one of the major reasons to keep the ROTC program on college campuses and high school campuses is it helps in recruiting. Have you ever considered setting up ROTC for nurses?

Admiral MARTIN. Yes, sir. We have a nursing ROTC program in the Navy.

Senator INOUYE. Where do you have them?

Admiral MARTIN. We have them at any of the colleges or universities that have a Navy ROTC program.

Senator INOUYE. Not in high schools?

Admiral MARTIN. No, sir. In college.

General BESTER. Senator, we also have an Army nurse ROTC program, but we do not have any in the high schools.

Senator INOUYE. Is it successful?

General BESTER. It has been in the past for us. I know the Navy is very successful. We are not successful at the current time and I think it is because of some issues, some decisions we made a few years ago. We have corrected those and we are already starting to see a swing back up.

The unfortunate thing, of course, about ROTC is you do not see anything come out of the pipeline for 3 or 4 years once you make your decision. So I think in the next 3 or 4 years we will see that turned around. But at the current time, this year, for example, Senator, we had planned on ROTC bringing in 175 nurses and we are going to bring in 113.

Senator INOUYE. And the Air Force?

General BRANNON. We do have an Air Force college level ROTC program. It is small, but we are increasing those numbers, and we have been thus far successful in bringing folks in under that. I am thinking we are at the level of 25 this year, so it is small.

Senator STEVENS. Do you get anyone from academies who come in to you?

Admiral MARTIN. No, sir.

Senator STEVENS. You?

General BESTER. No, sir.

General CARLTON. Yes, we have a program at the Air Force Academy training folks directly.

General BRANNON. Yes, sir.

Admiral MARTIN. The Naval Academy does not have that option.

Senator INOUYE. Let us know of ideas you have on recruiting and retention for nursing.

Senator STEVENS. Let me ask you another question that is sort of off the wall. Do you keep track of the people that have been in your services who go on and are working in civilian hospitals throughout the country?

General BESTER. We try to recruit, sir, as they leave active duty, we try to recruit to go into the reserves. We talk to each and every one as they leave active duty. And we have recovered—we had a very low select rate in the Army about 3 years ago and we have

recruited some of those folks that were asked to leave the Army in the 1997 time frame. We have now brought those back from active duty.

Senator STEVENS. I am not talking about active duty. I am looking at what kind of a cadre we would have to deal with that high school ROTC if we decided to start one. I do not know how many of your people who have been in the service are out there in the civilian community and to what extent they might be available to be members of a guard or reserve component that would help us deal with the ROTC.

We are very familiar with the fact that the ROTC has worked. A fellow named Colin Powell, who attended City College of the City of New York, is a good example. And they come through the high school ROTC. A great number of our people have come in through that channel. I would like to explore it.

Anything else, Senator?

ADDITIONAL COMMITTEE QUESTIONS

Senator INOUYE. No. I have got a whole flock of questions here, but it is lunch time.

Senator STEVENS. Well, we do thank you very much and we are proud of what you do. As we said, both of us have been beneficiaries of your services and we thank you for the kind of people you recruit and train and how you really effectively serve our country.

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

QUESTIONS SUBMITTED TO LT. GEN. JAMES B. PEAKE

QUESTIONS SUBMITTED BY SENATOR TED STEVENS

FISCAL YEAR 2000 SUPPLEMENTAL

Question. How much relief has your direct care system received from the fiscal year 2000 Emergency Supplemental?

Answer. In fiscal year 2000 the Army Medical Department (AMEDD) direct care system received $96.9 million from the fiscal year 2000/01 Emergency Supplemental. These funds resourced Army military treatment facility (MTF) incremental expenditures for the Tricare Senior Prime (TSP) demonstration, the escalating costs of pharmaceuticals, and revised financing expenditures that exceeded programmed funding.

The multi-year nature of the appropriation gave us the flexibility to carry forward funds not essential in fiscal year 2000 to satisfy fiscal year 2001 requirements. The Army carried forward $49 million for the TSP demo and revised financing cost overruns. However, in fiscal year 2001 the OSD Comptroller redirected the residual $49 million to the global settlement of managed care support contracts.

Language in last year's bill allowed the Department flexibility in determining how the supplemental money would be used. Unfortunately, the rise in private sector costs and the decision to globally settle outstanding obligations to our managed care contractors limited the direct system benefit from the supplemental.

Question. What happens when your MTFs are the first to pay the bills, or the last to receive any funding relief?

Answer. When funds are diverted from the direct care system to cover private sector care bills or when our MTFs are the last to receive funding, we must initiate actions to curtail spending. Expenditures on real property maintenance (RPM) and equipment are limited to emergency items only. These areas recover most readily if funds are delayed. Other actions taken include: Curtail all non-mission essential travel to include Continuing Medical Education; freeze all hiring for vacancies, both civilian and contractor; defer purchases of supplies until the next fiscal year; defer

contracts for items such as hospital maintenance; limit pharmacy refills to 30 days; defer elective surgery to the next fiscal year; and direct operative cases and procedures into the managed care network. However, it is difficult if not impossible to recover from these actions. Deferrals create tremendous backlog in our operations and a bill to be paid in following years; actions that reduce capability in the MTF result in increased private sector care costs.

Care not provided in the MTFs ultimately shifts to the more costly private sector. Such a shift only delays the inevitable. The DHP must pay the managed care support contract bills from next year's budget thereby reducing funds available for the direct care system. Investments in the MTFs would facilitate their recapture of expensive care from the private sector and contain the cost of the DHP.

CURRENT YEAR DHP FUNDING SHORTFALLS

Question. Do you have enough funds to fully execute your fiscal year 2001 program? Where are your shortfalls?

Answer. The Army Defense Health Program (DHP) has a total projected "direct care" shortfall in fiscal year 2001 of $330.2 million, however some of Army's shortfall is addressed in OASD(HA)'s $1.398 billion DHP draft unfinanced requirements list. Full funding of OASD(HA)'s unfinanced requirements would reduce Army's shortfall to $207.1 million. Army owes the AMEDD $53.5 million in RPM ($16.5 million from fiscal year 2000 and $37 million in fiscal year 2001). If these funds are received by the AMEDD the shortfall is further reduced to $153.6 million. This shortfall is in addition to any shortfall identified by TRICARE Management Activity related to the private sector care Managed Care Support Contract (MCSC). Army's DHP direct care shortfall can be broken down into four distinctive groups:

—Survival/Fact of Life: replacing lost military with civilian labor to maintain current patient workload level of effort to preclude sending patients out to the Managed Care Support Contract (MCSC) contractors; TRICARE Senior Prime demonstration project and Revised Financing bills; unachievable outsourcing and privatization (A–76) savings; funding for data quality medical coders; AFIP lease and Real Property Maintenance (RPM); and across the board utility/energy increases. The shortfall $330.2 million also assumes TMA does not release to MEDCOM funding held by TMA in a withhold account and Advances in Medical Practices (AMP) pharmacy dollars not yet distributed to MEDCOM. The TMA withhold shortfall will be programmatic for it is calculated in MEDCOM's fiscal year 2001 Total Obligation Authority.

—New Mission/New Programs: IM/IT special pay bonuses and dollars needed to ramp up MTFs in support of new benefits authorized by the Fiscal Year 2001 National Defense Authorization Act (NDAA) for Medicare-eligible military retiree.

—Infrastructure Sustainment: a sufficient level of maintenance is needed to maintain MTFs and avoid infrastructure decay. The RPM shortfall includes funding medical facilities at 2.73 percent PRV (category 500 medical buildings at 3 percent) versus current funding levels and RPM funding owed MEDCOM as a result of fiscal year 1999 PBD 041 directive, yet not received by MEDCOM.

—Business Initiatives: investment capital needed to increase the AMEDD's capacity to render cost effective, quality care in the direct system as an alternative to purchasing contract care. These funds are needed for health care infrastructure improvements such as enhanced provider/patient staff ratios, more appropriate support staff/provider ratios, and facility modifications.

Question. Is your direct care system fully funded in fiscal year 2001? How will your fiscal year 2001 shortfalls impact delivery of care in your hospitals and clinics?

Answer. Our direct care system is experiencing a significant funding shortfall in fiscal year 2001. The Army Defense Health Program (DHP) has a total projected "direct care" shortfall in fiscal year 2001 of $330.2 million. The $1.398 billion request from OASD(HA) will partially address this requirement. Full funding of the OASD(HA) unfinanced requirements would reduce Army's shortfall to $207.1 million. This shortfall will be further reduced by $53.5 million, funds to be paid to the Army Medical Department (AMEDD) by the Army for essential real property maintenance. After the above actions, our direct care system will still face a $153.6 million unfinanced requirement.

Without adequate funding our hospitals and clinics must initiate management actions to reduce spending such as: enforce hire lag; defer maintenance and repair of facilities; defer purchases of supplies and equipment; limit pharmacy refills to 30 days; defer elective surgery; curtail non mission essential travel to include Continuing Health Education. All of these actions are detrimental to hospital and clinic operations. Hire lag produces artificial savings in that delays in filling key per-

sonnel positions force our hospitals and clinics to refer patients to the private sector for their care. Ultimately such actions are more costly for the military health system (MHS), but those costs are deferred to either later in the year or the next fiscal year. Similarly, curtailment of all but emergency real property maintenance only creates an unmanageable backlog that in the long run produces more emergent conditions. Eventually repairs must be made or hospitals will not meet JCAHO standards.

Recruiting and retaining quality medical personnel is a major concern of the Army Medical Department (AMEDD). We must retain optimal aggregate number and specialty mix of qualified clinicians. To accomplish this we must ensure our physicians have the opportunity to treat the full spectrum of care required to support the graduate medical education program, to maintain certification and to function using industry standard technology and standards of care. Continued under-funding of our military treatment facilities impairs our efforts to transform, modernize and optimize the AMEDD.

TRICARE FOR LIFE

Question. To arrive at a cost for "Tricare for Life", has DOD used accurate assumptions for medical and pharmacy inflation rates?

Answer.

Inflation Rates

In the direct care system, we are restricted to using the Bureau of Labor Statistics Medical CPI for medical expenses (supplies and contracts) and we used a slightly higher rate for pharmaceuticals (5.5 percent vs. 3.9 percent in fiscal year 2000).

Increased Health Care costs are often incorrectly represented as simple inflation.

When the media say inflation costs for Prescription Drugs are going up 10–20 percent they usually mean expenditures. The Consumer Price Index (CPI) and the Producer Price Index (PPI), measure price changes only, not total expenditures.

Cost Growth is more than Inflation

Cost Components.—A traditional inflation definition does not capture changes in:

—Standard of Care (more comprehensive tests are routine now, a newer hi-tech ancillary service is required, more intensive drug therapies, etc.) Technology advances increase the cost of every area of healthcare from drugs to hand-pieces to sutures to MRI's.

—Changing Demographics of the patient population (population is aging and they use both a greater volume of services and the more expensive services.)

—Increased usage by our beneficiaries (new benefits cause an increased demand. A benefit with little out of pocket for the consumer will show an even greater increase in demand because of human behavior).

Cost Control.—Unlike private sector health care organizations, the military cannot elect out of unprofitable or high cost markets. The Army maintains hospitals and clinics in areas of the country, which have less than optimal business environments due to mission requirements. This diminishes our ability to control costs.

DOD Pharmacy Estimate.—DOD Pharmacy and Therapeutics Committee is estimating expenditures to be up 15 percent between fiscal year 2000 and fiscal year 2001. This figure includes both inflation and cost growth components.

Civil Health Insurance.—In the health insurance industry, the Employment Cost Index (ECI) from the Bureau of Labor and Statistics is showing an 8.5 percent increase in the average civilian health insurance premiums for the calendar year 2000. Once again, Health care costs are rising faster than inflation or even the medical component of the CPI or PPI.

FEHBP.—HMO premiums nationwide have outpaced inflation for several years. Premiums will increase between fiscal year 2000 and fiscal year 2001 an average of 8.5 percent. Fee-for-service plans will increase an average of 10.9 percent from fiscal year 2000 to fiscal year 2001.

Alternative indexing

While CPI and PPI do a good job of reflecting inflation, some other tool would be more appropriate to gauge the increase in health care costs because of other influences (Standard of care, changing demographics, usage rates, technology leaps, etc.)

Milliman & Robertson, Inc., a recognized leader in Health Care cost forecasting, publishes a Health Cost Index (HCI). This index contains inflation and other components such as utilization, leverage and mix/intensity. Their HCI (ALL BENEFITS category) has been 5.15 percent for fiscal year 1998, 6.6 percent for fiscal year 1999, and 6.5 percent for fiscal year 2000. The Pharmacy component for the HCI has been

14.1 percent for fiscal year 1998, 18.4 percent for fiscal year 1999 and 17.2 percent for fiscal year 2000 (See attached chart).

The use of the HCI published by Milliman & Robertson or a similar product would be a more accurate tool for projecting health care costs in the DOD.

Indexing to FEHBP HMO premiums or fee-for-service increases would be another alternative using a federal measure.

Question. On October 1st, where do you believe retirees will go for their new benefit—to the MTF or in the network?

Answer. Approximately 220,000 Medicare-eligible beneficiaries live near an Army MTF. Retirees who do not live near an MTF will undoubtedly continue to use their Medicare authorized provider, and have TRICARE act as 2nd payer. A survey performed by the TRICARE Management Activity (TMA) in January 2001 confirmed that those who currently use an MTF for at least some of their medical care, wish to continue to use the MTF. As faithful stewards of our taxpayers' dollars, I firmly believe that we must provide as much of their care as possible within our MTFs. I believe that many retirees prefer using military facilities. They enjoy continuing their relationship with the military family and have over the years been most patient and loyal to our health care system. However, base realignment and closures (BRAC) eliminated many MTFs, the large drawdown of the military reduced the availability of services at remaining MTFs and the creation of the TRICARE program reduced their access to our facilities. Supporting this population is important, not only to keep our promise, but to allow our physicians full range of complexity of patient diagnoses to maintain their skills at a level required for our clinicians who could deploy with relative short notice. If we cannot provide service that meets these beneficiaries expectations, they will seek care in the community at significantly greater cost to the government. We have one opportunity to succeed; failure to accurately resource our healthcare system to provide this level of care will ultimately drive higher costs through Medicare, a significantly greater pharmacy cost, and a less robust and ready military healthcare system.

Question. If the retirees go to your MTFs, is your system ready and funded for the new workload?

Answer. If the retirees continue being seen in our MTFs at their current numbers and utilization, then we are funded for them in our base. The NDAA changes their benefit and also their patient category. If more of them begin to be seen in our MTFs or the ones we presently see want more complete coverage within the MTF, then we will need supplemental funding.

Our present plan has us continuing our present scope of care for Tricare Senior Prime (TSP) enrollees with costs in the civilian market shared with HCFA. We also plan to convert our present space available care to equivalent lives and provide them the same level of care as TSP. Our military readiness requirements model requires another 30,000 65+ beneficiaries for which we are not presently funded but which we could do by leveraging our sunk costs if our budget is augmented. A top line increase in our budget is required for that.

FULL FUNDING OF THE DEFENSE HEALTH PROGRAM (DHP)

Question. Is your DHP funding stable and predictable? If not, how does that instability impact your healthcare system?

Answer. The DHP has experienced chronic, recurring shortfalls for a number of years. These shortfalls have necessitated infusion of funds during the execution year through budget amendments, reprogramming actions and supplemental appropriations. Unfortunately these adjustments are made to the execution year only with no increase to the top line funding for following years and so do not provide a stable and predictable funding environment. As a result, we return the next year once again requesting additional funding. The Department of Defense has ameliorated some of the out-year shortfalls through reprogramming of funds from the Service line to the DHP. However, these funds will primarily dampen the affect of escalating private sector care costs. Funds reprogrammed to the direct care system resourced pharmaceutical inflation.

However, the direct care system experiences cost growth that exceeds the allowable inflation factors. Pharmacy increases are attributable not only to inflation but to demand factors as well. The DOD Pharmacy and Therapeutics Committee estimates cumulative expenditures will increase by 15 percent between fiscal year 2000 and fiscal year 2001, far exceeding the 5 percent inflation factor allowed for pharmaceuticals. Furthermore, the inflation factors do not resource the military facilities for costs associated with maintaining industry level standards of care nor do they recognize requirements to incorporate technological advances in our MTF medical practice.

Furthermore, authorized entitlements without commensurate appropriated funds exacerbate an already problematic situation. For example, we anticipate increased usage of the military health system when new benefits produce an increased demand. However, benefits authorized without commensurate appropriated funds destabilize the DHP and ensure perpetual requests for supplemental funding.

Stable and predictable funding is necessary to increase physician satisfaction, retention, and readiness, avoid cost shifting to MCSC and deliver on commitment to DOD beneficiaries. Absent steady and reliable funding stream, we can't make wise investment decisions or develop reasonable investment strategies (i.e. labor, capital expense equipment). This leads to expensive, stopgap, and insufficient business operations. Instability can result in cost shifting to MCSC and increased reliance on the private sector care. Cost shifting to our managed care support contractors is a losing proposition for both parties since we jointly share the financial risk of providing health care. Continued under-funding of our military treatment facilities impairs our efforts to transform, modernize and optimize the AMEDD.

Without adequate funding our hospitals and clinics must initiate management actions to reduce spending such as: enforce hire lag; defer maintenance and repair of facilities; defer purchases of supplies and equipment; limit pharmacy refills to 30 days; defer elective surgery; curtail non mission essential travel to include Continuing Health Education. All of these actions are detrimental to hospital and clinic operations and can ultimately be more costly for the military health system (MHS), but those costs are deferred to either later in the year or the next fiscal year. Similarly, curtailment of all but emergency real property maintenance only creates an unmanageable backlog that in the long run produces more emergent conditions. Eventually repairs must be made or hospitals will not meet JCAHO standards.

Our direct care system is experiencing a significant funding shortfall in fiscal year 2001. The Army DHP has a projected "direct care" shortfall in fiscal year 2001 of $153.6 million, not addressed in the $1.398 billion request from OASD(HA). Annual top line funding must reflect both inflation and cost growth not related to inflation. Absent an annual top line increase (programmatic fix) the DHP will continue to require emergency supplemental funding. Potential impacts of not adequately funding Medical Treatment Facilities include providing standard of care but to fewer beneficiaries with leakage to more costly private sector, and endangers physician certification, military recruitment and retention and patient satisfaction.

Question. Has the DHP budget accurately forecast "cost savings" and "efficiencies?" Have these savings materialized? Have you had a loss in buying power over the years?

Answer. The combination of utilization management wedges, notional adjustments and overly optimistic A–76 savings have created a significant loss in buying power for the DHP and challenges from fiscal year 1996 through the present, and well into the POM years. The cumulative impact of these reductions equals $279.5 million from fiscal year 1996 through the present as shown below:

CUMULATIVE LOSS OF MEDCOM "BUYING POWER"

[In thousands of dollars]

Program or Requirement	Fiscal year—					
	1996	1997	1998	1999	2000	2001
UM & Notional Adjustments	(81,525)	(193,792)	(272,989)	(272,989)	(272,989)	(272,989)
A–76 "Savings" Decrement	.....	.....	.....	.....	(2,637)	(6,485)
Total loss in fiscal year 2000 constant dollars	(81,525)	(193,792)	(272,988)	(272,989)	(275,626)	(279,474)

VENTURE CAPITAL FOR THE DIRECT CARE SYSTEM

Question. Please tell us about your plans to make your hospitals and clinics more productive.

Answer. Optimizing productivity is a main effort for the Army Medical Department today. Military treatment facility commanders know that their performance will be judged in great part on the effectiveness of their clinics and hospitals in meeting the full spectrum of medical needs of the beneficiaries who have signed up for care. Of course, clinic productivity means more than the simple volume of patients seen each day. Individual efforts are taking place at each facility to maximize the throughput, the health and the satisfaction of our patients. Our productivity plans include focusing on being sure our patients receive their appropriate preventive medicine interventions so that their health is maximized and their need for vis-

its and admissions is less. These combined are likely to be the real secret for more productivity in our medical system today.

At the corporate level, we have been developing a comprehensive enrollment capacity model that shows us a detailed picture of the "as-is" at our facilities and allows us to explore and prioritize future changes and investments. The current model looks at primary care managers, populations served and enrolled, support staff and exam rooms available. PCM panel size, FTE availability, and support staff limitations are documented; and potential effects of suggested improvements can be examined. Parameters such as support staff and exam room shortages can be compared across the entire enterprise and prioritized for intervention based on the highest potential impact. This model is being expanded into specialty care areas over the coming months.

In its final form, the model will provide a virtual laboratory in which different assignments of PCMs, specialists and support staffs can be modeled and best outcomes chosen. Assignments can be based on best productivity outcomes for the Army as a whole, not one facility at a time. This effort and others in our overall optimization effort will directly and positively impact our productivity and provide more quality care across the entire Army.

As a recent example, additional efforts include deploying such advances in medical practice as a new method for processing Pap smears for our female beneficiaries for a $4.8 million investment this year. This computer controlled liquid cytology system will result in 90,000 fewer patient visits needed to provide effective screening for cervical cancer at a cost avoidance of nearly $6 million annually. Those saved visit appointments can be used to provide additional access to our clinics for needed care while our female patients require fewer visits for repeat testing. The system will be operational later this year with improved processes in place during next year.

Question. Do funding constraints keep you from optimizing your system? Would a "venture capital" fund, or a "Surgeon General's Investment and Initiative Fund" allow you to operate your system more smartly and at less expense?

Answer. Funding constraints for the Defense Health Program (DHP) have prevented full optimization of the Military Health System (MHS) going back as far as fiscal year 1986. For the DHP as a whole, this has meant chronic, recurring shortfalls, resulting in the need for recurring plus-ups from the President's Budget position. The chronological portrait below demonstrates the problems with chronically underfunding an "entitlement" program.

INCREASES AFTER THE PRESIDENT'S BUDGET

[In millions of dollars]

Fiscal Year	Reprogramming or Supplemental Type	Between PB & Execution	During Execution
1986	Reprogram & Supp.	$0	$360
1987	Supplemental	0	425
1988	Reprogramming	0	529
1989	Reprogramming	0	152
1990	Reprogramming	0	706
1991	Reprogramming	0	278
1992	None	0	0
1993	None	0	0
1994	Appropriation Act	290	0
1995	None	0	0
1996	None	0	0
1997	Appropriation Act	475	0
1998	Budget Amendment	274	0
1999	Amend. & Reprog.	304	0
2000	Supplemental	0	1,311

For the U.S. Army Medical Command, the combination of utilization management wedges, notional adjustments and overly optimistic A–76 savings has created significant challenges from fiscal year 1996 through the present, and well into the POM years. The fiscal year 2001 cumulative impact of fiscal year 1996–2001 reductions equals $279.5 million.

CUMULATIVE LOSS OF MEDCOM ''BUYING POWER''

[In thousands of dollars]

Program or Requirement	Fiscal year—					
	1996	1997	1998	1999	2000	2001
UM & Notional Adjustments	(81,525)	(193,792)	(272,989)	(272,989)	(272,989)	(272,989)
A–76 ''Savings'' Decrement	.....	.....	.....	.....	(2,637)	(6,485)
Total loss in fiscal year 2000 constant dollars	(81,525)	(193,792)	(272,988)	(272,989)	(275,626)	(279,474)

Because there is currently no source of external dollars for funding a "venture capital" fund, or a "Surgeon General's Investment and Initiative Fund", these dollars would need to be resourced through an internal reallocation process. In application this would mean that each of our medical treatment facilities (MTFs) would be taxed a certain amount from their base operating budgets, in order to find the dollars to create a venture capital investment and initiative fund. This would have two potentially negative results. First, not every facility will share in venture capital dollars, which means that many facilities will see only negative growth in their operating budgets as a result of this program. Secondly, and depending on how extensively this corporate "venture capital withhold" tax might be, we could even see recipients of venture capital investment dollars rechanneling these dollars into core shortfalls, rather than using them for their intended use as recapture initiative start-up dollars. In either case, internally funding of venture capital initiatives, from a system that is already constrained by inadequate funding levels can only produce sub-optimal results.

An inadequate level of funding in each fiscal year's budget results in the medical treatment facilities attempting to sustain the previous year's level of healthcare services versus seeking to recapture patient care workload performed in the more expensive private sector. Funding is not available to hire the additional ancillary support staff required to optimize the health care providers' capabilities to treat patients. Funding shortfalls in the Real Property Maintenance Activity (RPMA) account prevent the renovation of the medical treatment facilities to accommodate each provider having two exam rooms and the associated ancillary staff to efficiently provide patient care in accordance with current standards of practice. Computers are an integral component to the efficient delivery of quality healthcare services. The sustainment of the existing operational computers for designated staff members and the associated local area network (LAN) infrastructure requirements to support the computers is a challenge for medical treatment facilities in the present fiscal environment. There is no funding for the acquisition of computers that support the technological advances in software, such as Operating Room Management Applications, necessary to maximize the providers' efficiency.

We believe that the appropriate infusion of venture capital, external to the MEDCOM's operational budget, would greatly enhance our internal capabilities and the ability to recapture workload. By optimizing the military health system we can increase physician satisfaction, retention, and readiness; reduce the cost associated with increased reliance on private sector care; and finally to deliver on our commitment to all DOD beneficiaries.

Question. If such a fund were established, please explain how the "best business case" approach would be used to identify, select and fund projects.

Answer. The Army Medical Command has developed a five-step process for identifying, selecting and funding "best business case" initiatives:

1. The subordinate commands identify "best business case" initiatives through a nomination process. These nominated "best business case" initiatives are submitted to the Army Medical Command in a standardized business case analysis format. Use of the business case analysis format ensures that the funding requirement, capacity modeling, demand assessment and qualitative impacts are clearly articulated.

2. The Army Medical Command collects all of the nominated "best business case" initiatives and has them validated and prioritized by an interdisciplinary working committee. The criteria used by the committee to prioritize the initiatives take into account the initiative's return on investment, the timeliness of the initiative's ROI, the strategic alignment of the initiative with The Surgeon General's priorities, the initiative's qualitative return to the soldiers/patients, the complexity of implementing the initiative, and the interdependencies of the initiative with other initiatives. The interdisciplinary working committee is composed of subject matter experts from resource management, managed care, program and analysis, health facilities

planning, and clinical care. Other subject matter experts are added to the team as unique initiatives are submitted.

3. Once the initiatives have been validated and prioritized by the working committee, a Council of Colonels and General Officers then review the list and adjudicate any discrepancies between the working committee and the submitting commands. Once approved by the senior staff, the prioritized list is submitted to The Surgeon General for final review.

4. The top initiatives will then be developed into business plans and await funding.

5. When funding becomes available, The Surgeon General will select the top business plans and approve them for execution.

The Army Medical Command initiated this process in March 2001 and is currently in the process of validating and prioritizing "best business case" initiatives submitted by the subordinate commands. The goal is to have an "approved" and prioritized list of business case initiatives by late June 2001.

ORGANIZATIONAL REFORM

Question. Would the creation of a "Joint Medical Command" or a "USMEDCOM" remedy some of the problems experienced with DOD medical programs?

Answer. USMEDCOM potentially offers a more coherent command structure than the current medical organization within DOD. In a Joint Medical Command concept, one uniformed officer would have operational control of the Military Health System. This officer would also have responsibility for the programming, budgeting and execution of the Defense Health Program. This single point of accountability should improve budgeting and associated administrative processes.

Question. Is there clear authority and accountability in the DOD medical programs today? Would a "USMEDCOM" foster better lines of responsibility for DOD medical programs?

Answer. In my view, authority and accountability for DOD medical programs are in need of improvement. Establishing a USMEDCOM would offer a clearer command and control structure. This would enhance unity of effort for the DOD medical mission. I support the continued assessment of the proposal to establish a USMEDCOM. However, there should be a close examination of operational, staffing and resource issues at the detail level before any final decision is rendered.

RECENT TRICARE SATISFACTION SURVEY

Question. Have there been recent improvements in customer satisfaction with TRICARE? What remains to be done to further improve satisfaction with the TRICARE program?

Answer. On February 22, 2001, the Center for Naval Analyses/Institute for Defense Analyses (CNA/IDA) released the results of a Congressionally mandated evaluation. The CNA/IDA study uses the Annual Health Care Survey of beneficiaries and demonstrated a trend of increased satisfaction with TRICARE. Survey results show positive progress in the areas of customer satisfaction with access and overall quality of care. The percentage of all TRICARE Prime enrollees who were satisfied with their access to care was 74 percent, compared to 63 percent prior to TRICARE. In the regions where TRICARE Prime has been in place for three or more years, satisfaction with access to care improved from 70 percent prior to TRICARE to 83 percent. This is higher than recent civilian managed care data, which reported that 79 percent of beneficiaries were satisfied with access to care.

Satisfaction with overall quality of care increased from 73 percent prior to TRICARE to 82 percent. Satisfaction with quality of care improved from 79 percent to 90 percent in regions where TRICARE has been in place for three or more years.

The Army continues to work to increase beneficiary satisfaction. The following steps are being taken: enhance MTF health care delivery in order to improve beneficiary access; standardize appointment types; develop web-based appointing; increase access in remote areas; and implement the benefit improvements of the National Defense Authorization Act of 2001.

MEDICAL RECRUITING AND RETENTION

Question. How is your service doing in recruiting and retaining medical professionals?

Answer. In the last four years, the United States Army Recruiting Command has made 94 percent of their medical active duty mission for officers. This equates to around 1,200 new personnel per year. While each of the Corps presents its own set of challenges, without a robust student program we would be in far worst shape. Unfortunately, we have not received the production that we would like from Cadet

Command in recent years. This organization provided us the majority of our non-allied science Medical Service Corps officers and Army Nurse Corps officers. The economy has made it difficult to recruit some specialty-specific medical officers, dental officers and pharmacy officers. The total number of officers we must recruit has remained fairly constant over the last five years. What have altered are the programs necessary to get that number. Without the increase in student scholarship programs we would continue to decline. We must now essentially buy our officer force.

Prior to fiscal year 1992, the average loss rate for the Army Medical Department was approximately 9 percent of the force each year. The average for the last four years is 11 percent. This increase in loss rate is a combination of factors. These factors include OPTEMPO in shortage skills, lure of larger compensation in the civilian job market and completion of pre-accessioning incurred obligations.

We ended fiscal year 2000 at 97.7 percent of our strength. Currently we are projecting to end fiscal year 2001 at approximately the same percentage.

Question. Is the current special and incentive pay structure adequate to keep your force manned?

Answer. No, it isn't. Neither optimization nor any other improvement in health services delivery can be accomplished without quality healthcare professionals. Recruiting and retaining quality medical personnel is a major concern of the Army Medical Department leadership. The civilian health-care industry is an attractive alternative to our officers. We need funding to support additional incentives to attract and retain quality health care professionals.

Current special and incentive pay structure are becoming inadequate to provide sufficient incentive to meet aggregate end strength needs. Special pay rates (particularly entitlement pays) have remained fixed (in dollar amount) since 1990, resulting in a climate of devaluation. Maximum amounts allowed for discretionary pays have remained similarly fixed, precluding certain specialties which reached the maximum years ago from the possibility of any further increases. It is perceived that this devaluation, as well as escalating civilian practice salaries, is impacting on the Army Medical Department's ability to retain the optimal aggregate number and specialty mix of qualified clinicians in the long-term. To that point, the military Surgeons General have requested the Flag Officer Review Board at the Office of Assistant Secretary of Defense for Health Affairs to evaluate the current special pay rate structure, and develop Legislative proposals which will address rate increases in the fiscal year 2003 Unified Legislative and Budgeting (ULB) process.

In light of the current situation and projected trends associated with continuing to hold compensation at current levels, every effort is being made to effect a change as quickly as possible. In order to do this, the Army Medical Department wishes to use the Critical Skills Retention Bonus (CSRB) authorized in the Fiscal Year 2001 National Defense Authorization Act while the ULB initiatives are pending. The CSRB would be used as a contractual agreement to pay retention bonuses for specified amounts in return for obligated service. The amount of the bonus would depend on the specific specialty, for example—

—Physician CSRB would take the existing pay structure and present a bonus with a range of $12,000–$28,000/year. Specific medical specialties would then be targeted based on criticality.

—Dentist CSRB could be used to combine the proposed increases in entitlement pay and additional special pay (ASP) to result in a similar variable rate bonus for the critical retention years as follows: less than 4 years equals $15,000/year; 4 but less than 10 years equals $24,000/year; 10 but less than 13 years equals $17,000/year; 13 but less than 24 years (maximum YOS for CSRB) equals $15,000.

—Veterinarian and specific clinicians in the nurse, specialists and service corps would likewise be identified with a bonus to supplement the existing pay structure until the proposed increases are enacted, with a range of $6,000–$12,000/year.

The desired effect is to stop the rapid departure of our health care providers to the civilian health care sector. But we need the immediate authority and additional funding to support these initiatives.

Shortly, the Office of the Secretary of Defense for Health Affairs will provide a report on a recent study by the Center for Naval Analyses to the House and Senate Armed Services Committees. I believe this will quantitatively demonstrate that there is a pay disparity that we must continue to address in order to attract and retain quality health care professionals.

Question. Where do you have the most difficulty recruiting and retaining medical professionals? What specialties are most undermanned?

Answer. Currently our most critical recruitment challenges are Dental Corps officers and Pharmacy Officers. Even with a robust student scholarship program, we are over 100 dental officers below our budgeted end strength. While we are doing well within these student programs, our ability to attract fully trained dentists is minimal. Likewise, the starting salaries for trained pharmacists in the civilian marketplace simply puts us out of the competition without significant incentives. We are attempting to utilize the Health Professions Loan Repayment Program to attract more Pharmacy officers, but we have not offered the program for a sufficient length of time to be able to access its impact. Our retention in Optometry officers is less than optimal. The majority of our officers are from the Health Professions Scholarship program who separates upon completion of their active duty service obligation. Recruitment of Certified Registered Nurse Anesthetists is very difficult. Again, if we were not training our own, we would be in a more difficult state than we are now.

The most critical specialties right now are:

Dental Corps

General Dentists
Comprehensive Dentists

Medical Corps

Anesthesiologists
Diagnostic Radiologists
Psychiatry

Medical Service Corps

Pharmacy Officers
Optometry Officers

Army Nurse Corps

Operating Room Nurses
Certified Registered Nurse Anesthetists

HEALTHCARE NEEDS

Question. I would like to ask the members of panel one to comment on DOD plans to meet the healthcare needs of military personnel, dependents and veterans living in rural areas with no local access to military healthcare facilities.

What is the status of demonstration projects that seek to address these problems?

Answer.

1. Active Duty Service Members in Remote Areas

TRICARE Prime Remote.—The concept of providing TRICARE Prime in remote areas was tested in a demonstration program in Region 11 in 1996. TRICARE Prime Remote (TPR) was implemented CONUS-wide on 1 October 1999 and is the program to provide a Prime-like benefit for active duty service members who live and work greater that 50 miles from a military treatment facility (MTF). Most recent estimate show that there are 44,790 eligible active duty service members serving in remote areas (60 percent of these are Army and Army National Guard). These soldiers include recruiters, professors of military science at various universities, active Guard and Reserve members, etc. Over 90 percent of these soldiers are currently enrolled in TPR. Military oversight of active duty service member medical and dental care is maintained by the tri-service Military Medical Support Office (MMSO) located at Great Lakes, Illinois. In areas where TRICARE reimbursement to non-network providers is a barrier to access for active duty soldiers, waiver of the CHAMPUS Maximum Allowable Rate (CMAC) rates can be granted by the Regional Lead Agents.

2. Active Duty Family Members with their Sponsor in Remote Areas

Geographically Separated Unit Program (GSU).—The managed care support contracts in Regions 1, 2, 5, and 11 contain requirements to establish and maintain TRICARE Prime networks for dependents of soldiers eligible for or enrolled in TPR. Like TPR, this program was established as the result of the demonstration program conducted in Region 11 in 1966. Unlike TPR, this program is not yet available CONUS-wide. The TRICARE Prime Remote for Family Members (TPRFM) program will replace the GSU program and is scheduled to be implemented CONUS-wide in April, 2002. To provide interim financial relief to eligible remote family members who are paying TRICARE Standard cost shares and deductibles (except pharmacy), all cost shares, deductibles and co-payments are waived from 30 October 2000 until TPRFM begins. Procedures to implement this one time waiver are to begin in August 2001.

3. Active Duty Family Members not Residing with Their Sponsor in Remote Areas and Retirees under the Age of 65 in Remote Areas

These beneficiaries must rely on TRICARE Standard or Extra (if available) to share the costs of medical care. They may use the National Mail Order Pharmacy, network pharmacies or non-network pharmacies under the new TRICARE pharmacy benefit. They may utilize the TRICARE contractor health care finders to locate TRICARE participating providers in their areas and may use the toll free Health Care Information Line to obtain health care information.

4. Retirees Over the Age of 65 in Remote Areas

TRICARE Senior Supplement Demonstration (TSSD).—There are two demonstration sites, encompassing approximately 11,100 eligible beneficiaries: the Santa Clara County area of California, and the Cherokee County area in Texas. To date, out of the 368 beneficiaries enrolled, 266 (74 are Army) are enrolled at the Texas site and 102 (32 are Army) at the California site. California enrollment is so low because many of the beneficiaries have a BRAC pharmacy benefit. Congress mandated the TSSD under Section 722 of the Fiscal Year 1999 National Defense Authorization Act.

TSSD facilitates DOD payments on behalf of Military Health System (MHS) beneficiaries receiving Medicare benefits while enrolled in the TRICARE Program as a supplement to Medicare. An eligible beneficiary is described as a member or former member of the Uniformed Services, a dependent of a member of the Uniformed Services, or a dependent of a member of the Uniformed Services who died while on active duty for a period of more than 20 days. Those eligible must meet the following requirements: (1) 65 years of age or older; (2) entitled to hospital insurance benefits under Medicare Part A; (3) enrolled in the supplemental medical insurance program under Medicare Part B; and (4) reside in a demonstration program area.

Each eligible beneficiary who enrolls in the TRICARE Program under the TSSD Program is required to pay an enrollment fee. Payment of the enrollment fee can be made annually or quarterly. The enrollment fee has been established at $576 per person per year. The Medicare Part B Premium is $50.00 per month. Enrollees in the TSSD may not receive health care in military hospitals or clinics, including pharmacy services, while they are enrolled in TSSD.

TRICARE is the primary payer for pharmaceutical benefits, and beneficiaries pay Standard CHAMPUS Non-Active Duty Dependents (NADD) cost-sharing premiums. Beneficiaries also have access to the National Mail Order Pharmacy (NMOP). The demonstration is currently scheduled to end December 31, 2002.

Federal Employees Health Benefit Project (FEHBP–65).—In 10 randomly selected sites of the United States including the vicinity of Coffee County, Georgia, and extensive parts of southern Georgia, the Federal Employees Health Benefit Project (FEHBP–65) is being offered to many Medicare-eligible Uniformed Services retirees and their family members. An important feature of the project includes coverage that can be extended to family members who are not Medicare-eligible. The project is also open to certain other individuals who are not eligible for Medicare, such as surviving dependents and certain unmarried former spouses. The demonstration extends the same health care benefits as the federal government's health benefits program for its career civilian employees. In order to participate, otherwise-eligible persons must live within the ZIP codes that encompass one of the demonstration sites.

The FEHBP–65 demonstration is a three-year trial congressionally mandated and jointly sponsored by the Department of Defense (DOD) and the Office of Personnel Management. It started in January 1, 2000, and is currently scheduled to end December 31, 2002.

DOD makes eligibility determinations through the Defense Enrollment Eligibility Reporting System (DEERS), at the time of enrollment. The project has not proven to be popular with military retirees. As many as 129,112 uniformed services retirees and family members were eligible to participate but only about 7,751 lives are covered and represent 5.85 percent of those eligible. The total enrollment is 5,734 (representing 7,751 lives). The Army's enrollment tally is about 2,999 or 52.30 percent of the total enrollment (5,734). A site by site comparison showed low enrollment in those project sites near military treatment facilities with strong pharmacy services. At the end of the project, the Department of Defense will submit two evaluation reports along with their recommendations. One will be submitted to Congress and the other one to the Government Accounting Office (GAO). In collaboration GAO, the Office of Personnel Management (OPM) and DOD designed the survey instrument to satisfy the congressional requirement for an evaluation of FEHBP–65. Currently, the survey results are pending and there is no official data available, as yet.

Pharmacy Redesign Pilot Program.—The DOD implemented a Pharmacy Redesign Pilot Program on July 1, 2000 for DOD beneficiaries over the age of 65 at two sites

selected randomly. The pilot locations are Fleming County, Kentucky (including selected areas of Kentucky, Ohio and West Virginia), and Okeechobee County, Florida. The benefit for the eligible beneficiaries is equivalent to the TRICARE Extra pharmacy benefit with an enrollment fee of $200, which can either be paid in a one-time lump sum of $200 or can be paid in two $100 installments every six months, plus the applicable co-payments. The co-payments are 20 percent for up to a 30-day supply of medication from a TRICARE Retail Network Pharmacy or $8 for up to a 90-day supply of medication from the National Mail Order Pharmacy. There were only approximately 600 who signed up for this program. The project closes on 1 April 2001, when the TRICARE Senior Pharmacy Program is implemented nationwide. Those who signed up for the program above will have their annual enrollment fee refunded based on a "prorated" basis.

New Senior TRICARE Pharmacy Benefit.—Effective 1 April 2001, all beneficiaries over the age of 65 become eligible for the same pharmacy benefits as other military beneficiaries. After April 2001, beneficiaries who become eligible for Medicare Part B must have it to be eligible for this benefit. This includes the National Mail Order Pharmacy, TRICARE network pharmacy—or if necessary—non-network pharmacies.

TRICARE as Second Payer to Medicare.—On 1 October 2001, for military beneficiaries over the age of 65 who have Medicare Part B, TRICARE becomes second payer to Medicare. This is expected to significantly lower or eliminate the out of pocket costs for medical care for older retirees in remote areas.

The Army Medical Department in collaboration with the Air Force and the Navy has implemented numerous best business practice improvements to the DOD Pharmacy benefit. These include the simplification and standardization of the pharmacy co-pays to a tiered co-pay structure which parallel the "industry trend" with civilian pharmacy benefit management companies. The co-pays have been realigned and will be based on drug formulary status regardless of the pharmacy point of service the beneficiary utilizes. The co-pays will be $3 for Generic drugs and $9 for Brand name formulary drugs. There will continue to be no co-pay for prescriptions filled at medical treatment facility (MTF) pharmacies. Additionally, to ensure patient safety remains a primary focus as pertains to drug therapy, the Pharmacy Data Transaction Service (PDTS) is currently being implemented nationwide which will integrate the MTF Pharmacy patient medication profile with the National Mail Order Pharmacy (NMOP) and the retail pharmacy network. This system will screen for duplicate drug therapies as well as significant drug-drug interactions and will provide instant messaging back to the provider or pharmacist for appropriate interventions. Joint Pharmaceuticals contracting initiatives continue with our VA partners for the major high cost drug classes where clinically appropriate and economically feasible. In fiscal year 2000 these joint contracting initiatives resulted in over $64 million in cost avoidance for the major drug classes. Lastly, aggressive efforts continue in implementing a Uniform Formulary and expanding the DOD Basic Core Formulary which will ensure more uniform availability of drugs to meet a majority of our patients primary care needs.

QUESTIONS SUBMITTED BY SENATOR KAY BAILEY HUTCHISON

TRICARE BUSINESS PRACTICES

Question. Last year I asked if the amendment that provided for increased reimbursement levels for TRICARE was adequate, particularly in areas where our military personnel could not get a provider to see them. I was told last year that we had seen an improvement by all three Surgeons General. Additionally, reports from Dr. Clinton's office also say that providers and patients are happier, but I can tell you though that is not the information that I am receiving from my constituents to include patients and providers. Many say they cannot locate a provider that will accept TRICARE for the very reasons that we talked about before, inadequate reimbursement, delay in payment and inadequate fee structures that do not compare with their civilian counterparts. Currently TRICARE reimbursement is at the 45 percent rate allowable, like MEDICARE reimbursement. It is my understanding that under the old CHAMPUS program, providers were reimbursed at 80 percent. An increasing number of MEDICARE providers are leaving networks because of this low reimbursement rate.

Gentlemen is this adequate?

Answer. In military treatment facility catchment areas with large concentrations of military beneficiaries, large numbers of a broad spectrum of providers, and relatively small effect of competing other health insurance, the present reimbursement rates appear to be adequate. Access to care is usually good given these cir-

cumstances. Fortunately, much of the active duty military beneficiary and many of the retiree population in CONUS are located at such sites.

However, access problems do exist in certain remote locations under certain circumstances. These include states where there are no MTFs, locations where there are small TRICARE beneficiary population concentrations, areas where TRICARE rates are significantly lower than other health insurance rates, areas that are truly medically underserved, regions where speed of claims payment has been a problem in the past, and regions of the country where anti-government, anti-managed care sentiment is a factor.

Question. Will this impact the number of providers available to our over 65 year old beneficiaries?

Answer. Our over 65 beneficiaries who have Medicare Part B and who are not being seen at an MTF are already accessing health care under Medicare, Medicaid, the Veterans Administration and/or other health insurance. TRICARE as second payer to Medicare and the new senior pharmacy benefit should be a significant enhancement to the care they are already receiving. Because this infrastructure is already in place, we do not foresee that TRICARE reimbursement rates will have a negative effect on the numbers of providers that see our older beneficiaries.

Question. In areas such as Dallas, which has approximately 100,000 beneficiaries, and there is not a military medical treatment facility, how are we addressing issues of access to providers?

Answer. Dallas is an area distant from an MTF where the managed care support contractor for Region 6 was required to develop a TRICARE Prime network. Network adequacy is evaluated quarterly using the government prescribed network adequacy standards (access standards, drive time standards, ratio of specialists to population, PCM panel no larger than 2000, etc.) in the Region 6 managed care support contract. The network in Dallas is in compliance with these standards. There have been periodic problems with network providers leaving the network, but according to the Region 6 Lead Agent, contractor teams are sent to the area and these deficiencies have always been resolved. Beneficiaries who are having difficulty finding a provider may call the contractor health care finder at 1–800–406–2832 at the TRICARE service center to locate a network provider near them.

Question. Some of my constituents are concerned about the quality of provider you get when you reimburse at 45 percent as opposed to 80 percent. Are you offering our soldiers and their families the best of the best medical care or second rate medical care through TRICARE?

Answer. Based on the standards set in the managed care support contracts for civilian and institutional providers to be in the managed care support contractor network, all network providers are screened against established quality indicators. The standards for becoming a network provider include:

—Must be CHAMPUS authorized (verification of educational, post-graduate training, fellowship certificates and board certificates for requested clinical privileges or scope of practice, evidence of current state license(s), statement of physical and mental health status, chronology of practice experience, letters of recommendation, statement of malpractice history, DEA certificate, current report from National Practitioner Data Bank, non-board certified physicians practicing as specialists shall have two letters attesting their clinical competence by physicians certified in that specialty).

—Additional criteria and information is required for mental health practitioners.

—Hospitals, home health agencies, etc. must be JCAHO accredited (or other recognized national accrediting authority).

Provider is re-appointed no more than every two years and provider file is kept updated.

Question. What do you believe are the key issues in attracting and retaining providers?

Answer. Adequate reimbursement rates, prompt payment of claims, and a reduction in the administrative requirements of managed care.

TRICARE FOR LIFE

Question. I can tell you that the TRICARE For Life is a most welcomed program for those retirees that we made the promise to so many years ago. The 2001 National Defense Authorization Act, calls for the implementation of the pharmacy benefit on 1 April 2001 and the TRICARE For Life implementation 1 October 2001. A concern that I have is the number of military retirees who never enrolled in Part B of Medicare. This is a requirement of the new plan. An estimated 10 percent of eligible military retirees in San Antonio never enrolled in Part B of Medicare. Medicare eligible retirees who turned down enrollment in Part B face a 10 percent pen-

alty on monthly premiums for every year they are past age 65 when they enroll. For a 75 year old that would be $91 a month, twice as much as someone who enrolled at age 65.

Can you comment on your meetings with HCFA on identifying those who did not enroll in B and what solution is needed to waive this penalty?

Answer. Representatives of the TRICARE Management Activity and the Office of the Assistant Secretary of Defense for Health Affairs have met with HCFA to work on procedures for DOD computer systems to access HCFA databases and identify who has Medicare Part B. We have been told that will be possible prior October 2001. Throughout the dual eligible population, we estimate 6 percent have not enrolled in Part B when they turned 65.

Waiving the Part B penalty will probably require legislative action. The Army supports a one time waiver for the Medicare Part B penalty for those over 65 Medicare eligibles who did not enroll in Part B at the age of 65.

Question. What marketing plan is planned to educate the over 65 retirees about about TRICARE For Life?

Answer. The over 65 retiree population is a well informed and well networked group that is already participating robustly in the ten TRICARE Senior Prime Demonstration sites. With the TRICARE Senior Pharmacy Program (TSPP), effective 1 April 2001, and TRICARE for Life (TFL), effective 1 October 2001, the TRICARE Management Activity (TMA) along with the Services has been conducting and implementing numerous communications and customer service initiatives. These initiatives include, for each respective program, periodic news releases, Coalition and Alliance Briefings, TRICARE website updates and links specifically for these two programs, TRICARE Conference Sessions to update medical personnel, the NDAA "101" briefing distributed to the TRICARE community world wide and web accessible, DEERS/Medicare letter sent to all DEERS enrolled retirees and their family members, TFL and TSPP Frequently Asked Questions (FAQs) on the TRICARE website, the toll free number, 1–877–DOD–MEDS, for TSPP, the TSPP brochure sent to 1.5 million potential beneficiaries, identification and mail outs to Congressional Medal of Honor recipients concerning eligibility for TRICARE, to mention a few. These initiatives are part of the TFL and the TSPP Communications Plans developed last year and implemented continuously, primarily at the Office of the Lead Agent and military medical treatment facility (MTF) levels.

The Army also annually conducts Retiree Appreciation Days, seminars at major Army installations or metropolitan areas, providing up-to-date information on retirement benefits, including TRICARE. There are 33 Retiree Appreciation Day events scheduled across the country beginning April 26 and ending in November.

The TMA marketing plan implementation addresses many of the key issues of outreach to "hard to reach" beneficiaries and providers. Many of the initiatives are accomplished at the Office of the Lead Agent and Medical Treatment Facility levels. A sampling of marketing events is provided below:

TFL Marketing Steps: (Office of the Lead Agent (OLA) and MTF level actions)

1. MTFs provided complete info package as information is known
—Preliminary sources on TMA website as guide
—OLA teleconferences (monthly and as necessary)
—OLA sponsored Regional Beneficiary Counseling and Assistance Coordinator (BCAC) training conference
2. Contractor line informed and modified
—Contingent on contract modification approvals
3. Website modifications (use links into TMA whenever possible)
4. MCSC briefing schedule (contingent on contract modifications)
—Supplement with briefs from MTF in catchment areas
—Supplement with OLA briefs in non-catchment areas
5. Articles for Installation newspapers
—Using only official releases due to gaps in program
—As program details finalized new articles to be made available
6. Send press release to all Congressional offices in Region 1
—OLA action when contract modifications are approved
7. Visit with all Congressional offices
—OLA action—education of congressional admin staffers (field offices)
8. News release to retirement organizations and commercial news
—TMA, SG or OLA levels
9. Meetings with retiree organizations
—OLA for non-catchment and state levels
—MTF coordination in catchment areas
—MCSC (contingent on contract mod approvals)

10. Direct mailing to over-65
—TMA or SG level (not cost effective at MTF level)
11. Publication of new brochure
—TMA level
—Not cost effective at local levels
—Reduces chance of misinformation or error
12. MCSC education of network providers
—Contingent on contract modifications

Question. Can you comment on how the implementation of TRICARE For Life will impact your resources? (Physician contacts per year average 12 per year in those over 65 as compared to 4.6 per year in ages 15–44). (Days of Hospital Care per year average 269 days of care per one thousand persons in those over 65 as compared to 54.6 per one thousand persons in ages 15–44).

Answer. This group of patients will stress our capacity to handle primary care patients with the primary care managers we now have within our system. To answer your question about the need to account for the increased utilization of older patients, I can tell you that the standard panel size for each PCM in our model has been adjusted to allow for just the increased workload. Our models for specialty care will also account for the added workload. These older patients will be welcomed not just because they are members of the Army family, but also because they bring serious medical and surgical problems to our medical providers that will maintain and even improve their medical readiness. The bottom line is that we can handle a portion of the eligible population under the Tricare For Life program as we fully optimize our existing facilities.

TFL is a step in the right direction towards keeping faith with our most senior retirees. However, to meet this increase in workload will require an increase in resources and a renewed vigilance to ensure maximum efficiency of our health care resources. Where we can leverage the existing infrastructure of the direct care system by covering the marginal costs of caring for the older retirees who have higher average expenses. We will save the taxpayer's dollar and protect an ever dwindling Medicare trust fund. The key is an infusion of dollars that will allow us to fully utilize our MTF's capacity. We are continuing work on a model that will allow marginal expansion of our MTFs to bring a greater number of retirees back to the MTF.

Question. Gentlemen, will you be able to meet the goals of TRICARE For Life and still be able to provide care to the active force based on your projected budgetary guidelines?

Answer. Our primary mission is threefold: project and sustain a healthy and medically protected force; deploy a trained and equipped medical force that supports deployed Army forces; and manage the care of the soldier and the military family. As currently structured, there are no additional funds for TFL within the Direct Care System. There are budget projections that will allow TRICARE to act as second payer to Medicare in the civilian sector. We support expanding our limited Space Available capacity and formalizing a relationship with more retirees that allows them to receive care in the MTF within the clinical capability of that MTF. This would require funds earmarked for the marginal costs of taking care of additional beneficiaries.

MEDICAL PERSONNEL

Question. Are you able to recruit the professionals you need to meet medical personnel requirements (Active and Reserve Components)? (All three services identify recruiting and retention of nurses as an important shortfall).

Answer. No, we have not been able to recruit the number of health care professionals we need to meet the medical personnel requirements. In the last four years, the United States Army Recruiting Command has made 94 percent of their active duty mission. This equates to around 1,200 new personnel per year. While each of the Corps presents its own set of challenges, without a robust student program we would be in far worst shape. Unfortunately, we have not received the production that we would like from Cadet Command in recent years. This organization provided us the majority of our non-allied science Medical Service Corps officers and Army Nurse Corps officers. The economics of the country have made it extremely difficult to recruit specialty-specific medical officers, dental officers and pharmacy officers. We now must utilize larger student programs to obtain the same number of individuals. I believe that this is an important point. The total number of officers we must recruit each year has remained fairly constant over the last five years. We have altered the programs necessary to get that number. Without the increase in student scholarship programs we would continue to decline. We must now essentially buy our officer force.

Specifically, nurses are not at our budgeted end strength. With the nursing shortage, we have seen a decline in the Reserve Officers' Training Corps (ROTC) scholarship requests; thus our ROTC accession numbers have decreased significantly. Recruiting Command has made up for some of this shortfall. Having to recruit a greater number of working nurses means we must compete with civilian institutions for the same critical specialties at a time when they are offering streamlined hiring practices and significant recruitment and retention bonuses. As in the civilian sector, we have critical shortages in the critical care, nurse anesthesia and perioperative specialties. Currently we are experiencing low fill rates in the majority of our specialty development courses. Although we are engaged in an aggressive marketing campaign to increase our seat fill, if these current fill rates continue we will have a severe shortage of these clinical specialties in the out years.

For COMPO 2 requirements there are shortfalls in the nurse anesthetist and perioperative nurse populations.

Question. Are medical professionals able to sustain their clinical skills at a high level? (We have funded the Joint Trauma Training Center at Ben Taub which is a Triservice program).

Answer. The principal means whereby Army Medical Department (AMEDD) healthcare providers sustain their clinical skills is through the delivery of healthcare to active duty soldiers, dependents, and retired personnel in our Military Treatment Facilities (MTFs). In particular, the care of trauma patients provides a valuable training environment that more closely duplicates the rigors of combat casualty care. To ascertain if our healthcare providers are caring for trauma patients, we analyzed AMEDD Standard Inpatient Data Records (SIDRs) for fiscal year 1995–99 from Army Community Hospitals (ACHs) and Army Medical Centers (AMCs). During fiscal year 1995–99, there were a total of 41,815 trauma admissions; 22,273 (53.3 percent) trauma admissions to AMCs and 19,542 (46.7 percent) trauma admissions to ACHs. Over the period of analysis, the number of MTFs decreased by 26.3 percent (38 to 28), and the annual number of trauma admissions decreased by 51.9 percent (11,698 to 5,622). The decrease in annual trauma admissions was most pronounced in ACHs (64.1 percent) compared to AMCs (38.7 percent). While standards for continuing competence in all disciplines of medicine are under development, these data suggest significant erosion of trauma readiness training in our MTFs, especially our ACHs. The AMEDD is not unaware of these statistics and the implications for medical readiness.

In our AMCs, directors of graduate medical education programs routinely supplement training our residents receive with rotations at American College of Surgeons (ACS)-verified Level I trauma centers. These rotations ensure our training programs meet certification requirements, and our residents graduate with the requisite clinical skills. To enhance sustainment of clinical skills among healthcare providers assigned to deployable medical units, the AMEDD is an ardent supporter of the Joint Trauma Training Center (JTTC) at Ben Taub Hospital in Houston, TX. Our Forward Surgical Teams (FSTs) receive a one-month training rotation at Ben Taub Hospital every two years. The JTTC program has had clear, demonstrable results in enhancing individual and team trauma care skills and improving the medical readiness status of FSTs. Currently, we are exploring ways to expand trauma care delivered by one or more of our AMCs and integrate ACH healthcare providers and deployable units in these AMC trauma care programs. Based on the success of trauma simulators at the JTTC, we are also considering expanded use of advanced trauma simulations to augment trauma training. We anticipate these analyses will be complete the end of fiscal year 2001.

Question. Does the current medical structure meet military readiness and force projection requirements?

Answer. The current medical structure is a legacy force that was designed to support the "Cold War" scenario. It is a large, heavy, somewhat cumbersome force that cannot offer the Combatant Commanders the flexibility or versatility required of a modern military medical force. The medical force structure is currently undergoing a Force Design Update under the Medical Reengineering Initiative (MRI). This redesign will provide the Army with the medical structure to support the Interim Force and pathway to the Army Objective Force. MRI emphasizes deployability, modularity and split-based operational capability. MRI provides a flexible medical force enabling split-based operations and employs reach-back technologies. Due to Army resource constraints, the current medical structure is supporting a mixed force, part legacy structure and part MRI reengineered. Presently, the Army can only convert 42 percent of its medical operational structure to the MRI medical force by the end of fiscal year 2006. Although this "mixed force" does support the Army transformation priorities, its sustainment poses operational support difficulties for personnel, training and equipping. Warfighting is complex—providing Combat

Health Support (CHS) is equally complex. A MRI medical force would provide a well-balanced fully interoperable CHS capability that can gain medical dominance at every point in the spectrum of operations. Conversion of the entire medical force structure would provide full spectrum CHS to the Army as an integral part of the joint force that can rapidly deploy with sufficient capability to meet the most demanding missions.

Question. What have been the military medical requirements for the Balkans, Southwest Asia, and other deployments? What is the impact?

Answer. Total AMEDD deployed in support of the following missions: JTF–B SOUTHCOM: 56 AMEDD personnel; MEDRETE (SOUTHCOM monthly aver) 35 AMEDD personnel; Desert Spring (CJTF-Kuwait) 128 AMEDD personnel; OSW-Saudi Arabia (MEDEVAC Crew) 15 AMEDD personnel; MFO Sinai 25 AMEDD personnel; ARCENT Area Support 22 AMEDD personnel (monthly aver); Bright Star Exercise 250 AMEDD personnel; Operation Joint Forge-SFOR 351 AMEDD personnel; Operation Joint Guardian-KFOR 198 AMEDD personnel; RSOI FE UFL Exercise to PACOM 120 AMEDD personnel; Cobra Gold Exercise to Thailand 150 AMEDD personnel; and GME backfill to Korea 18 AMEDD personnel (for aver 120 days).

The analysis covers only USA MEDCOM overseas deployments for fiscal year 2000 and fiscal year 2001, as of 2 April 2001.

Combined for fiscal year 2000 and the first six months of fiscal year 2001 U.S. Army MEDCOM has deployed 956 military personnel totaling 68,592 mandays in overseas supported activities.

The following is a summary break out of the support provided:

CENTCOM—60 personnel totaling 6,439 mandays.

EUCOM—397 personnel totaling 41,914 mandays.

PACOM—388 personnel totaling 7,463 mandays.

SOUTHCOM—111 personnel totaling 12,776 mandays.

Total officers soldiers deployed equal 523 personnel totaling 44,227 mandays.

(Note: the above officer bullet includes MC/DC totals) Analysis of the total officers deployed reflects U.S. Army MEDCOM provided 290 Medical Corps and Dental Corps Officers totaling 23,244 mandays.

Total enlisted soldiers deployed equal 333 personnel totaling 24,365 mandays.

Operational impact in regards to FTE (full time equivalent) yield the following summary:

Total FTE cost (Officer and Enlisted), $30.57 million.

MC/DC FTE cost, $16.9 million.

All other Officer FTE cost, $8.4 million.

Enlisted FTE cost, $5.27 million.

Formula: (Mandays/220)(per FTE cost)=FTE total.

1 military FTE = 220 days in a year.

FTE cost per enlisted, $47,600.

FTE cost per officer (minus MC/DC), $87,600.

FTE cost per MC/DC, $160,000.

Question. How does the third party collection system currently work within the Military Medical Treatment Facilities?

Answer. The Third Party Collection Program (TPCP) at the MTFs is responsible for billing the health insurance of eligible beneficiaries to recover the costs of health care services provided. The MTF uses these collections to enhance health care to our patients through the purchases of supplies and services that may not otherwise be available within the hospital's budget.

At this time, the TPCP utilizes the diagnosis-related group (DRG) billing methodology for inpatient services and an all-inclusive charge for outpatient services. Each outpatient clinic, with an assigned MEPRS code, has their own clinic rate charge. The all-inclusive charge covers the cost of the clinic visit itself, the professional fee of the clinician, and any and all ancillary services that may (or may not) be provided within the visit itself.

The billing methodology will change from an all-inclusive to an itemized billing rate effective 1 October 2001. Instead of sending one bill for the health care services rendered, the clinic charge (hospital or facility service fees), professional fee of the clinician and any and all ancillary charges (radiology, pathology and pharmacy) will generate a separate bill based on the CPT code of the service provided and priced using an adjusted (for region) CMAC rate.

THIRD PARTY COLLECTIONS

Question. What is the impact on Medical Treatment Facilities of providing the medical services and collecting for those services (for example at Wilford Hall and

Brook Army Medical Center in San Antonio)? Is the money returned to the Medical Treatment Facilities that provided the services?

Answer. Under a memorandum of understanding between Bexar County Hospital District (dba University Health System (UHS)), Brooke Army Medical Center (BAMC) and the Air Force's Wilford Hall Medical Center (WHMC), a trauma network was established to facilitate the appropriate acceptance and transfer of Code III trauma victims for Bexar County and non-Bexar County patients.

In consideration of the military medical treatment facilities (MTF) support, UHS will pay to the MTFs a total sum of $3 million annually. The annual sum is paid in four equal installments of $750,000, alternating the quarterly payments between BAMC and WHMC. While WHMC receives this money directly, BAMC does not. These funds are received by the Army Medical Command (MEDCOM) who reimburses BAMC based on per episode of care provided to non-beneficiaries, civilian emergency patients when other collection efforts are exhausted.

The cost of civilian trauma patients to BAMC is $13.1 million annually. Approximately $3 million is reimbursed through insurance collections, $7.3 million is received from MEDCOM under this agreement and debt management processing, leaving a shortfall to the MTF of $2.8 million.

QUESTIONS SUBMITTED BY SENATOR ERNEST F. HOLLINGS

BLOOD-RELATED DISEASE RESEARCH

Question. Under Congressionally Directed Medical Programs, is there on-going research targeted on blood-related diseases such as leukemia or lymphoma? Is blood-related disease research to be consistent with the mission of DOD medical research?

Answer. The Navy has, for several years, received congressionally directed increases in RDT&E funds to support the National Bone Marrow Program, which provides a bone marrow registry and supporting research on methods for tissue typing and matching. The National Bone Marrow Program directly supports the treatment of leukemia, as well as other diseases, through the matching of prospective bone marrow recipients with suitable donors. Funding for the program was $34 million in fiscal year 2001. There is no on-going research within the Air Force or Army's Congressionally Directed Medical Research Programs that is targeted on blood related diseases, to include leukemia or lymphoma.

The answer depends in part on how broadly the phrase "blood-related disease" is to be interpreted. Blood diseases, as they are generally defined, are not a consequence of most military activities or threats. The major exception is radiation exposure, which can severely depress bone marrow function with profound hematological and immune system effects, and can induce cancers in cellular elements of the blood system. Radiological effects are considered by the Armed Forces Radiobiology Research Institute (AFRRI). Aside from this impact, blood diseases are not considered within the mission of DOD medical research. This fact notwithstanding, there may be military applications of knowledge gained through blood disease research. The military applications of such knowledge are for the most part peripheral to the diseases themselves and do not benefit victims of these diseases. Certain research projects on blood-related diseases may be consistent with the DOD medical research mission if the anticipated findings can be clearly demonstrated to have direct relevance and applicability to a militarily unique need. All such projects need to be considered on a case by case basis.

The principal area of potential application is in combat casualty care. Hemorrhage resulting from trauma is the primary cause of battlefield deaths, and the DOD medical research mission is accordingly concerned with the development of hemorrhage countermeasures, to include the application of clotting enhancers that were originally identified through studies of clotting disorders. Clotting disorders are also occasionally associated with trauma-induced hemorrhagic shock, reperfusion, and hypothermia; such disorders represent secondary complications of trauma that are much less important than hemorrhage as a cause of battle-related morbidity and mortality, but are nonetheless consistent with the mission of DOD medical research. In addition, studies on platelet function may be consistent with the DOD mission if they can be related to the development of improved (field-expedient) means for platelet preservation and storage. More broadly, the DOD is interested in substances that can improve oxygen flow to organs under hemorrhagic conditions where blood flow is reduced. To the extent that studies of anemic conditions or therapies for these conditions can be related to the development of pharmacological or other countermeasures that could be employed in a field trauma management setting, they may be consistent with the DOD medical research mission.

If one considers blood-related disease more broadly, there are a number of infectious disease pathogens of military importance that are blood-borne and cause symptoms directly through their effect on blood cells or blood vessels. Examples include malaria, HIV, and a number of viruses that can cause hemorrhagic fevers. However, such diseases are not typically considered to be blood diseases, per se. Within the DOD medical research mission, they are instead addressed through strategies targeted at the infecting organisms. Because the primary focus of this component of DOD mission research is on prevention of disease, symptomatic treatments targeted at a particular organ system such as blood are not of military relevance. Research on the pathogenic effects of these organisms on blood components are only studied insofar as is necessary to understand the life cycle of the organism, identify appropriate targets for intervention (i.e., through vaccines or drugs), and identify and understand correlates of protection that are essential to the evaluation of product efficacy.

Question. Has any work been done to identify the occurrence rate or prevalence of blood-related diseases resulting from environmental exposure in the theater of war?

Answer. The Army Medical Department, through the Army Medical Surveillance Activity at the U.S. Army Center for Health Promotion and Preventive Medicine, tracks the incidence and prevalence of all serious diseases and injuries that affect soldiers, sailors, airmen, and Marines, deployed and non-deployed. Several studies focused on the health of troops deployed to Bosnia have been completed. Although these studies were not specifically designed to examine blood-related diseases, results did not indicate any increased risk of these diseases in military personnel deployed to Bosnia.

HEALTH OF AMERICAN TROOPS

Question. The National Academy of Sciences and the Institute of Medicine issued a report in January which made recommendations to the Department of Defense about improving the health of soldiers deployed to the theater of war. The Institute's recommendations are compelling and, if implemented, would make a strong commitment to the health of American troops. Are you familiar with the Committee's recommendations? Do any of the individual services, or the Department of Defense, have implementation plans for the any of the Committee's recommendations? If not, why not?

Answer. The IOM report included 32 recommendations grouped under six strategies for action by DOD. Army actions, some in conjunction with the other Services and the Office of the Assistant Secretary of Defense (Health Affairs), have acknowledged the themes included in many of these recommendations and strategies. Below are two current Army activities that directly address these strategies and recommendations.

First, under the leadership of the Deputy Assistant Secretary of the Army for Environment, Safety, and Occupational Health, the Army is finalizing policy to implement requirements of DOD Instruction 6490.2 and other relevant DOD force health protection policies. The Army policy will outline roles and responsibilities for Army organizations to provide effective, continuous medical surveillance of Army personnel, improve information-sharing concerning medical threats and countermeasures, and reduce short- and long-term health risks to Army personnel through the operational risk management process. This effort reflects several IOM recommendations, including recommendation 2.2 "DOD should integrate expertise in the nuclear, biological, chemical, and environmental sciences for efficient environmental monitoring of chemical warfare agents and toxic industrial chemicals for both short- and long-term risks". This policy will be stated in a numbered Department of Army policy letter to be released in May 2001. Plans for implementation of this policy are due within 120 days of publication of the letter. We expect that the implementation plans will highlight those areas in which the Army will achieve measurable progress in addressing the recommendations in the IOM report.

Second, we are developing an Army Health Strategic Plan which includes three goals for Army health: Project and sustain a healthy and medically protected force; Deploy a trained and equipped medical force in support of the Army transformation; Manage and promote the health of the soldier and the military family. Several long term objectives and strategies of this plan address the strategies and recommendations of the IOM committee. For example, the long-term objectives under the first goal address:

—Optimizing the individual fitness and health of soldiers pertaining to pre-deployment readiness,

—Maintaining the health of soldiers while deployed,

—Developing more robust hazard and health surveillance capabilities,

—Developing knowledge and materiel solutions to deployment health problems.

This strategic plan provides the basis for the Army Medical Department Balanced Scorecard through which specific initiatives to reach these goals will be developed and tracked. The Balanced Scorecard is designed to provide the appropriate focus so that concrete progress toward the goals may be measured. The Scorecard is targeted for release in 3QTR fiscal year 2001.

QUESTIONS SUBMITTED BY SENATOR ROBERT C. BYRD

OUTCOMES MANAGEMENT PROJECT

Question. Last year, at my request, and with the concurrence of Chairman Stevens, the Committee on Appropriations added $10 million for the Walter Reed Army Medical Center to conduct an Outcomes Management demonstration project for targeted disease. I am advised that, not only has this project been successful at Walter Reed, but that the work here should serve as the model for the Military Health System to evaluate Clinical Outcomes and accountability of the system to beneficiary needs. Would you care to elaborate on that?

Answer. Medical Outcomes Metrics are the measures by which ours, and every other medical system, should be evaluated and ultimately funded. Due to advances in both information technology and medical science, we now have the ability to collect and process data that reflects our system's performance based on how much better our patients feel or how well they are progressing through their illness or injury. What is happening at WRAMC is unique in that the software that has been developed is owned by the government, and was developed to work with the CHCS software package. Perhaps what makes this program most unique is the dedication and hard work of those developing it. Through the visionary leadership and support of the Hospital Commander, few programs can claim greater success given the rapid development and fielding of this effort. I feel the outcomes management Program at WRAMC can serve as a cost and time efficient example of how to build the next generation of patient management software and serve as the standard bearer of the future. This program will take us into an era of accountability not only for how well we practice the healing disciplines, but also for how well we serve our patients.

Question. It is clear to me that this work is important not only to the Military Health System, but as well to the Nation. Does your vision include plans to expand the scope of this effort to include other Federal agencies, Civilian Academic Institutions, or State Health Organizations?

Answer. The WRHCS Outcomes Management Program has demonstrated preliminary (the program is just being initiated) outcomes improvement in a number of chronic conditions—Diabetes, Congestive Heart Failure, Chronic Obstructive Pulmonary Disease, Pediatric Asthma, Breast Cancer, Hepatitis C and Stroke—and in a number of prevention measures. The Program is linked to MEDCOM's DOD/VA Clinical Practice Guidelines. I believe that this high quality, evidence-based program can be applied to any healthcare organization. We will make our results and protocols available to any health care organization that is interested prior to actual publication of results.

Currently we are in discussions with the Department of Veterans Affairs to determine how we can share our software packages and to work with DVA experts in defining and evaluating our efforts. The greatest benefit of this effort will be within the DOD and DVA health care systems, due to the similarity of patient management systems. We are also working to identify partners who are interested in rural and other underserved populations that can assist us in determining how to best disseminate the results of our work to maximize the quality of care for these populations by empowering the physicians who care for them. I do intend to aggressively seek other opportunities within state and local health systems, particularly those who primarily serve poor and underserved populations.

Question. I understand that in order to sustain the impact and momentum of the progress made so far in the improved Provision of Care for the Walter Reed Health Care System, and to assure that the progress made so far is not lost, an additional $16 million will be necessary for fiscal year 2002. Would you outline how these funds will be invested?

Answer. Monies provided to this program in fiscal year 2001 were used in the rapid definition and deployment of this program. In fiscal year 2002 we anticipate utilizing these additional funds to significantly expand the number of patients participating in the program, and to increase the number of disease states included in the program. In addition, we anticipate fiscal year 2002 monies to be used to de-

velop an exportable program package, which we will begin to deploy in fiscal year 2003. Fiscal year 2002 funding includes monies to support travel to other medical facilities to train healthcare providers via a "train-the-trainer" philosophy which has been shown to be the fastest way to indoctrinate the existing culture with a new sense of accountability and expectations. Though we have accomplished much this fiscal year, funding for fiscal year 2002 is crucial for the success of this program and to realize the dividends on investments made this fiscal year.

Question. Given the importance of this effort and the skill and proven success of the Walter Reed Management team, how can you insure that the Outcomes Management Program is fully funded in the future to insure that the benefits realized by our investment are not lost?

Answer. There are two things I intend to do in order to insure this important work is not lost. First, my staff is working to incorporate the fiscal needs of the program into the fiscal year 2003 budget request. I expect the program to be fully funded within the 5-year budget plan. Secondly, I have directed that Walter Reed will develop an exportable program that each Army regional command Tricare region can implement. I have directed the Program Office to begin deployment of the initial software/program support modules beginning second quarter fiscal year 2003. As previously stated, I believe the medical outcomes management program presents us with the opportunity to actually gauge our ability to serve patients and too justify our continued level of service. As such I will insure that, as rapidly as possible, the program will be funded under the POM and that the knowledge and expertise we have gained is replicated throughout the Army Medical Department.

QUESTIONS SUBMITTED BY SENATOR PATRICK J. LEAHY

HOSPITAL SYSTEM

Question. As the Army develops lighter, more deployable units and equipment, is the Army developing an equally mobile hospital system to deploy with this force. I understand the service's current hospital system is aging, obsolete, and bulky. I also worry that the Army's current forward-deployable medical hospital does not offer protection from nuclear, chemical, and biological weapons. I would appreciate your telling us about what steps the Army is taking to upgrade this essential capable to meet the needs of the Army's broader transformation. Specifically, what plans has the Army developed to modernize the mobile hospital systems? What funds has the service dedicated to carry out that plan in the fiscal year 2002 budget? Can you additionally please provide any relevant data on this effort to the Subcommittee?

Answer. The Army Medical Department's (AMEDD) has worked to ensure that the medical capabilities possess responsiveness, mobility, survivability, agility, and versatility in support of the CSA's Transformation to the Objective Force. Since 1998, the Directorate of Combat and Doctrine Development (DCDD) of the AMEDD Center and School (AMEDD C&S) has been involved in identifying operational requirements for a future medical shelter system (FMSS) which could plausibly replace the current hospital system. The operational requirements address strategic deployability, tactical mobility, integrated support systems (environmental control, power, water distribution, medical gases), NBC protection as well as state-of-the-art medical capabilities and integrated telecommunications/digitization. Phase 1 of this effort resulted in a virtual reality design of a mobile surgical unit, and Phase 2 will provide actual engineering schematics. Advances in technology, composite materiels, as well as other advancements have indeed made the Deployable Medical System or DEPMEDS "dated", in need of a major overhaul, and it will reach the end of its life cycle before the end of this decade. We must capitalize upon emerging and future technologies that will provide a system that is a "quantum leap ahead" of any system that is known today, and then identify the funding to resource that system.

The AMEDD is working with the Transportation Corps to define medical requirements that promote tactical mobility for the Family of Medium Tactical Vehicles Load Handling System (FMTV/LHS). The AMEDD transformation strategy demands a Combat Health Support (CHS) system that is rapidly deployable, yet fully supportive of the deployed force. The FMTV–LHS will require one trained soldier approximately six minutes to attach and emplace/displace a shelter. The PM–MTV has committed funding to initiate design and development of the FMTV–LHS prototype by Stewart & Stevenson and Cargo Tec.

In September 1998, DCDD AMEDD C&S in conjunction with Medical Research and Materiel Command (MRMC), U.S. Army Tank and Automotive Command (TACOM) and Mobile Medical International Corporation (MMIC) were involved in a collaborative team effort to define requirements for the development of a mobile

surgical unit. For the FST capabilities, the concept envisioned a 2-container system that could be deployed in two C–130 sorties and transported on one FMTV/LHS and one Medium Tactical Vehicle—Load Handling System (MTV/LHS) trailer. The FMTV–LHS consists of a truck with a pneumatic load-handling system that will be used to load, unload, and transport current and future deployable medical systems. The maximum weight of the container with equipment shall not exceed 8.8 STons. Each container will be equipped with environmental control, self-internal power, telecommunication, and NBC protection. This concept evolved into a family of systems, which MMIC termed the 21st Century Mobile Hospital System (21CMHS). The concept and resulting virtual reality design, based upon combat developer user requirements, was evaluated as having merit as a future shelter system for the FST and as a possible follow-on to DEPMEDS. It was recommended that funding options be explored. Phase 2 of this initiative involves a continuation and refinement of system requirements. An AMEDD C&S led Integrated Concepts Team comprised of DCDD, MRMC, Oak Ridge National Labs (ORNL), OCAR, and USAF personnel have partnered with the National Automotive Center (NAC) to refine the operational requirements and concepts for the FMSS. The FMSS is the AMEDD's modernization effort for the next generation of medical shelter systems. This effort is looking at developing a family of rigid and soft-sided containers that will facilitate strategic and tactical mobility consistent with Army Transformation while providing an appropriate environment and state-of-the-art medical facilities for surgery, intensive care, and other hospital support services. These shelters will incorporate autonomous power generation and environmental control and be wired for digitization and communications. They will be capable of operating in chemical and biological threat environments. Their multi-functional design will allow for quick reconfiguration for multiple medical applications.

ORNL possesses technologies, capabilities, and some of the projects that support an initiative to include a new type of a Tactical Quiet Generator (QTG) that is lighter, quieter than the existing QTG and has 25 percent better fuel consumption that could be integrated into the shelter system for emergency power. ORNL added that they could develop a shelter that will be the same height as the MTV cab and will expand upward. The employment of the FMSS in the theater of operation was discussed to include strategic deployability and tactical mobility and strategic mobility requirements. In addition, the Forward Surgical Team (FST) must be capable of deploying as far forward as the Battalion area given the capability of the MTV–LHS. Congress provided $8 million for procurement of the Advanced Surgical Suite for Trauma Care (ASSTC) shelters. The ASSTC, though, does not meet the AMEDD's operational requirements. It is anticipated that the Office of the Secretary of Defense (OSD) will release $7.3 million for research and development before the end of May 2001 and the total $8 million must be committed by 30 September 2001. It has been recommended that these funds be redirected and utilized for concept maturation, requirements refinements, and advanced prototyping of an integrated medical hospital system in support of the future Objective Force. The AMEDD has developed requirements for a containerized shelter system to support far forward surgical capability as well as other areas of combat health support. At the present time, there is no dedicated continued funding for either of these two initiatives.

The current DEPMEDS, in and of itself, does not provide protection from NBC weapons. Under development, though, is the Chemically Protected Deployable Medical Systems (CP–DEPMEDS) which possesses the capability to chemically and biologically harden existing DEPMEDS equipped hospitals and is a Joint Service effort with the U.S. Air Force. It provides an environmentally controlled collective protection for Level III medical treatment facilities that will support healthcare in an environment contaminated with biological or chemical warfare agents.

Under the Medical Reengineering Initiative (MRI), this collective protection will be applied to the 84-bed and 164-bed MRI Corps Combat Support Hospitals. Under the Medical Force 2000 (MF2K) structure, CP–DEPMEDS is applied to the hospital unit base (HUB) of the Combat Support Hospital. CP–DEPMEDS will be part of Operations Project Stock and will be centrally stored/maintained in depot, and as prepositioned assets in theater. Another current and related program, Chemically Biologically Protected Shelter System (CBPSS), addresses the need to provide collective protection to medical units operating farther forward on the battlefield. CBPSS, which is an integrated system, will be provided to medical treatment squads that provide Level I medical treatment. Future testing and evaluation will validate the feasibility of providing CBPSS to Level II Medical Companies and Forward Surgical Teams. While not addressing forward deployed medical hospitals, CBPSS does demonstrate the AMEDD's efforts to provide collective protection to medical units wherever it is deemed necessary on the battlefield. NBC protection is a requirement for future medical shelter initiatives to ensure that this protection is available. There

is dedicated funding for both CP–DEPMEDS and CBPSS through Joint NBC Defense Program and Army funding. The current fiscal year 2002 Budget figures are as follows: CPDEPMEDS—3 systems, $3 million; CBPSS—32 systems, $15.7 million. Training sets will be issued to AMEDD C&S and Regional Training Sites—Medical sites.

The AMEV program implements the Army's Transformation Vision by recapitalizing and remanufacturing excess Bradley M2A0s to enhance and modernize the capabilities of the Legacy Force. Without the AMEV, medical ground evacuation assets will remain essentially unchanged since the 1960's. The AMEDD proposes fielding AMEV's to enhance mobility in the Counter Offensive Force. With at a per unit purchase cost of $870,000, the unfunded requirement for 280 AMEVs is $243,600,000. The UFR is recognized/validated by OCDSOPS as a level III UFR competing against all other combat systems within the Maneuver BOS.

The total objective force requirement for the UH–60Q(HH–60L/HH–60M) is 385 MEDEVAC aircraft; 356 for the warfight and 29 for the operational readiness float account. Of the warfight 356 aircraft, 191 go to the Active Component and 165 to the Army National Guard. The current modernization projections for the UH–60Q(HH–60L/HH–60M) complete the 117 aircraft requirement identified in TAA–05 for Force Package One by 2013 and the 75 aircraft in Force Package Two by 2018. At a cost of $4.6 million per UH–60Q(HH–60L/HH–60M), the 117 Force Package One aircraft will cost $538 million and the 75 Force Package Two aircraft will cost $345 million; cost of the entire program is $883 million.

QUESTIONS SUBMITTED TO VICE ADM. RICHARD A. NELSON

QUESTIONS SUBMITTED BY SENATOR TED STEVENS

FISCAL YEAR 2000 SUPPLEMENTAL

Question. How much relief has your direct care system received from the fiscal year 2000 Emergency Supplemental?

Answer. In fiscal year 2000, Congress provided an Emergency Supplemental to the Operations and Maintenance (O&M), Defense Health Program (DHP) account totaling $1.2 billion. From this Supplemental, Navy medicine received $52 million for our direct care system. We used the $52 million to purchase collateral equipment for new construction that was being completed in the near-term, and to buy forward-funded health care contracts within our Medical Treatment Facilities and Dental Treatment Facilities. Navy medicine did not have a significant backlog of unfunded issues as we started fiscal year 2001 but changes made by the TRICARE Management Activity (TMA) have reduced our available funding and together with new healthcare benefits have created a significant funding shortfall. Of note is the fact that the workload produced by Navy medicine actually increased from fiscal year 1999 to fiscal year 2000.

Question. What happens when your MTFs are the first to pay the bills, or the last to receive any funding relief?

Answer. The Navy Medical Treatment Facilities [MTFs] which make up the Direct Care System have operated each of the last three years on a severely constrained funding profile which we define at the sustainable range of operations just above minimally executable. This allows us to merely sustain current operations and does not allow the Direct Care System to make needed improvements to patient care capabilities, renovations of buildings that are continuing to deteriorate, replaced outdated equipment, pursue additional continuing medical education for our health care providers, nor fully implement new healthcare benefits. The funding situation we have been in over the past three years has seen new TRICARE benefits being added, thereby increasing the bills for care in the Military Health System (MHS). Of necessity, what we cannot provide in-house is referred to the private sector, via the Managed Care Support Contractors. This has caused a requirement within the Defense Health Program and the Office of the Secretary of Defense (Comptroller) to continually seek offsets from the Direct Care System to help defray a portion of those increased private sector costs. Our MTF Commanding Officers are placed in the position where they do not replace medical equipment when needed, and conduct only "breakdown" maintenance, that is, repair the breakdown, for both medical equipment and facilities since we cannot afford to put in place regular maintenance contracts which might preclude the breakdowns in the first place. At the same time replacement of current medical equipment with newer technology is not being accomplished and we have seen significant downturns in equipment expenditures in the past three years.

The constrained funding environment described above also causes a further degradation of the morale of our medical personnel as evidenced by the Center for Naval Analysis study which shows the above issues are having a negative impact, along with the low compensation issue, and causing our mid-grade providers to leave the Naval Service, most often without replacements being available.

CURRENT YEAR DHP FUNDING SHORTFALLS

Question. Do you have enough funds to fully execute your fiscal year 2001 program?

Answer. There is a Defense Health Program (DHP) unfunded requirement of $1.4 billion which the Surgeons General testified to as a need for an Emergency Supplemental DHP Appropriation. $220 million of the $1.4 billion is identified for the three Service's Direct Care Systems. Of the $220 million, Navy Medicine's portion may be $40 million (depending on TRICARE Management Activity (TMA) distribution). If the $1.4 billion emergency supplemental is passed, Navy Medicine would get back the TMA 4th quarter loan of $45.1 million, in addition to the $40 million noted above for a total of: $85.1 million.

The $85.1 million would still not meet the unfunded fiscal year 2001 requirements of $90.0 million leaving unfunded items such as: Optimization efforts; NMC San Diego TRICARE Senior Prime Supplies; DHP Health Professional Scholarship Program shortfalls; Pharmacy Advances in Medical Practice (AMP) Tail from fiscal year 2000; Maintenance and Repair (MRP) and new Immunizations. Fully funded, the Navy Medicine budget requirement is $150.9 million.

A key issue/concern over the emergency supplemental involves the timing of the bill passage and the provision of the funding to the Services. If it is not passed and funding provided until August then Navy Medicine will be unexecutable in the 4th quarter because funding [$45.1 million] has been moved forward into the third quarter. Navy Medicine would have to implement draconian actions to even start the 4th quarter. TMA has identified that they will go into violation in mid-July 2001 if funding is not provided and Navy Medicine would not be far behind them. This information has been reviewed with TMA on 1 March 2001.

Question. Where are your shortfalls?

Answer. We have a total of $90 million that is unfunded within our fiscal year 2001 program.

This includes the following items:

	In Millions
Submitted and Validated unfunded requirements	$40.0
Revised Financing	29.0
Pharmacy	4.3
Immunization Tracking	.6
Data Quality	3.2
Expense Equipment	2.9
Additional Revised Financing	8.6
Pharmacy AMP tail	14.9
Immunizations (1/2 year Prevnar)	5.9
HPSP Shortfall	3.5
Utilities (29 Palms)	.4
NMC San Diego TRICARE Senior Prime Supplies	3.0
Optimization	13.7
Total	90.0

These are funding requirements that take us to a solvency level, where our mission operations are considered to be sustainable.

Along with the actions already taken to remove the $17 million withhold, not providing the $21 million Advances in Medical Practice funding, and having the entire $7.1 million rescission impact held totally against the Direct Care System, Navy Medicine becomes unexecutable.

To fully fund Navy Medicine in fiscal year 2001 the following funding is required:

[In millions]

Unfunded Requirements [from above]:	$90.0
Increase MRP from 2.23 percent to 3.0 percent (the Medical Target)	24.4

Fund fourth quarter NDAA Implementation	45.1
SUBTOTAL	159.5
Unallocated Funds Available	8.6
TOTAL	150.9

Question. Is your direct care system fully funded in fiscal year 2001?

Answer. We have previously identified Navy Medicine's fiscal year 2001 shortfall of $150.9 million. That funding requirement, which is due in part to identified shortfalls and various offsets already taken by the TRICARE Management Activity, would provide funding to bring Navy Medicine to a fully funded program. We have included in that figure the additional $24.4 million for Maintenance and Repair (MRP) which would bring that program to a funding level of 3 percent of Plant Replacement Value which is the ASD (HA) Medical Standard. TMA has used funding withheld from the Service budgets to fix various fact of life changes in the Managed Care Support Contracts. Even if a supplemental is approved at the $1.4 billion level, Navy Medicine's Direct Care System will only receive benefit of approximately $79 million and would still have a requirement for additional funds of approximately $72 million to achieve the $150.9 million noted for fully funding our Direct Care System.

Question. How will your fiscal year 2001 shortfalls impact delivery of care in your hospitals and clinics?

Answer. We have focused funding reductions in the non-patient care areas, such as Maintenance and Repair of Property (MRP), initial outfitting of our new construction facilities, and other general areas such as travel and equipment. At the same time, cost drivers which affect the way we provide healthcare (the practice of medicine) are being absorbed by our Medical Treatment Facilities (MTFs). An example is pharmacy costs which are escalating at rates above ten percent yet funded essentially level with last year. Navy MTFs are paying the pharmacy bill and giving up something else in the MTF to afford these increased costs. My fear is that we are coming dangerously close to not performing required maintenance, replacing our medical equipment, and impacting on our continuing medical education programs.

TRICARE FOR LIFE

Question. To arrive at a cost for "TRICARE for Life", has DOD used accurate assumptions for medical and pharmacy inflation rates?

Answer. The funding estimates for the TRICARE For Life (TFL) benefit in fiscal year 2002 are still working. I am reluctant to even state the latest number as the estimates are still being worked extensively between the Assistant Secretary of Defense (Health Affairs) (ASD[HA]), the TRICARE Management Activity (TMA), the Services, the Department of Defense (DOD) Actuary and others to derive the best estimate of the costs for the wide range of benefits coming on line. I can tell you that the latest estimate is around $4 billion for the DHP in fiscal year 2002 which would drop off considerably in fiscal year 2003 because of the kick-in of the accrual financing methodology.

Question. On October 1st where do you believe retirees will go for their new benefit—to the military treatment facility or in the network?

Answer. Those retirees who have developed substantial relationships with providers in military treatment facilities (MTFs) will continue to rely on the MTF for their care and will likely have higher expectations regarding the delivery of services. Those retirees who have not utilized MTF services other than perhaps pharmacy services will likely not "come back" to the MTFs. The vast majority of those retirees who intermittently use the MTF will be swayed by specific MTF capabilities including access, availability of services, reliability, enhancements, comprehensive management including care coordination and case management, and customer service. For those retirees who have current relationships, it is important to recognize that they too will eventually migrate away from the MTF if the above capabilities and expectations are not met. Of particular importance in being able to provide comprehensive care and high quality customer service will be the ability to predict the health care requirements and then resource for those needs. Partial commitment and marginal funding will result in a spiral of attrition which will quickly accelerate and impact both our ability to live up to the intent of Tricare For Life and our need to serve these important beneficiaries to maintain a robust Military Health System.

Question. If the retirees go to your MTFs, is your system ready and funded for the new workload?

Answer. Navy Medical Treatment Facilities (MTFs) currently provide care on a space available basis to retirees age 65 and older except at Naval Medical Center San Diego which is a TRICARE Senior Prime Demonstration site with an enrolled 65+ population. The performance of this level of effort for the Medicare Eligible Retirees accounts for approximately 16 percent of the healthcare performed at our three Medical Centers, 9 percent of the care performed at our Family Practice Teaching Hospitals, 8 percent of the care at our non-teaching community hospitals and much smaller percentages across the remainder of the Navy's Ambulatory Care Centers and Clinics. The care provided by our Medical Centers and Teaching Hospitals is in direct relationship to the higher morbidity cases that this population presents for our residency/training programs and is supportive of the medical readiness requirements for our healthcare professionals.

We believe many 65+ beneficiaries who have established relationships with civilian providers will maintain those relationships, particularly now that TRICARE will be second payer. But, at the same time, we anticipate an increased demand by our 65+ population for care in our military treatment facilities (MTF). Our number one priority is the health and welfare of our active duty forces. To ensure the operational forces are ready to deploy and that our medical personnel maintain the skills necessary to support the operational forces, we must balance our workload to meet readiness and graduate medical education requirements, and our commitment to our active duty families and other retirees and their families. Our plan is to provide as much service as possible in-house, and then rely on available private sector care (where Medicare is first payer and TRICARE second payer) for the remainder. However, the Military Health System's ability to meet the health care needs of our entire beneficiary population is contingent upon full funding of our current requirements as well as those new benefits contained in the Fiscal Year 2001 National Defense Authorization Act.

FULL FUNDING OF THE DEFENSE HEALTH PROGRAM (DHP)

Question. Is your DHP funding stable and predictable?

Answer. The short answer to this question is no. The best example I can give of this is what is happening this year, and is somewhat typical of the past two fiscal years. We started out fiscal year 2001 at a funded level which was in the low sustainable range. Since the beginning of the fiscal year we have had $17 million withdrawn from our direct care funding for a 1 percent withhold at TRICARE Management Activity (TMA), we have not received Advances in Medical Practice funding in the amount of $21 million to initiate pharmacy actions and pay for the tail on advances in medical practice implemented during fiscal year 2000, we have had a $7.1 million reduction placed against the Direct Care System associated with the Congressional Rescission which was taken totally against the Direct Care System and none against the Private Sector Care arena thus effectively doubling the financial impact of the rescission.

Finally, we have been informed of a TMA proposal to withdraw $45.1 million from the fourth quarter to pay for implementation bills associated with the Fiscal Year 2001 National Defense Authorization Act. In total that would amount to an impact of $90.2 million and would make us unexecutable during the remaining portion of this fiscal year. Subsequently, TMA withheld $45.1 million from the fourth quarter to pay for the implementation of the Fiscal Year 2001 National Defense Authorization Act.

Question. If not, how does that instability impact your healthcare system?

Answer. The impacts have been significant! First and foremost, this instability prevents our Commanding Officers from putting a healthcare plan in place for their command that they are confident they can accomplish. They are placed in a position of merely reacting to the next set of reductions to their financial planning figures. This lack of stability causes important equipment replacement, facility repairs and upgrades, and continuing medical education requirements to be placed on hold until such time as either a supplemental or a reprogramming action takes place and provides funding at an adequate level to the Direct Care System. These supplementals usually take place late in the fiscal year and although the funding is needed and appreciated, it does not allow us to project that funding over the entire year to achieve the greatest level of benefit.

Question. Has the DHP budget accurately forecast "cost savings" and "efficiencies?"

Answer. In the past our budgets have reflected efficiencies and savings. "Utilization Management" was an example of these type of efforts. Through adopting managed care practices we have been able to make some savings, but we are presently affected by the same cost drivers as in the civilian healthcare community.

Question. Have these savings materialized?

Answer. At the same time there are moderate savings, new healthcare benefits have been implemented that has required the reinvestment of those savings. As demonstrated by the number of times we have had reprogramming and supplemental appropriations, the budgeted savings have almost never materialized in the form of actual savings as the healthcare program requirements have outstripped any savings identified.

Question. Have you had a loss in buying power over the years?

Answer. Loss of buying power is a certainty. Again, we must only look to pharmacy were we are allowed to budget for inflation at 5.9 percent while costs are escalating at over ten percent. Over the past several years there have been numerous articles in the civilian sector referring to cost increases for various healthcare plans. These articles and the literature fully support that the medical inflation rate is close to 10 percent while the Office of Management and Budget has continued to use a standard inflation rate across the entire DOD between 3.9 percent and this year 5.9 percent. Rising costs have also affected our facilities maintenance program and limited our medical equipment replacement program.

VENTURE CAPITAL FOR THE DIRECT CARE SYSTEM

Question. Please tell us about your plans to make your hospitals and clinics more productive.

Answer. The Navy Primary Care Optimization Model (PCOM) was developed to assist corporate and medical treatment facilities (MTFs) with calculating actual and potential enrollment capacity, while providing baseline health system information. Many commands have recently reported moderate capacity increases.

Clinic support, time management techniques, space utilization and equipment support are several of the means used to increase provider availability, ensure appropriate clinic operations and utilization, and increase provider and clinic productivity.

—Clinical manpower support has been increased through resource sharing, direct contracting, and relocating internal staff. Increases in clinical support positions include appointment and secretarial personnel, and medical record coders. In addition to these efforts, reserve personnel are used to augment clinic staff and increase clinic productivity. The recent transfer of operational control of the Naval Reserve medical community to BUMED will improve the ability to identify and coordinate reserve support for both provider and clinical support staff.

—Time management techniques that increase provider availability in the clinic include: minimizing collateral duties (assignments in addition to clinical duties) and committees assigned to providers; designating specific days and hours for command wide administrative, training and meeting times; and establishing guidelines to coordinate care team schedules (provider, nurse, corpsman).

—Space utilization—An adequate number of examination rooms per provider is required to maximize provider/clinic productivity. Many sites have increased the number of provider examination rooms by consolidating administrative spaces and converting administrative spaces into examination rooms.

—Equipment support—Additional investments in support equipment include auto reminder systems, advanced phone systems, mobile dictation, voice recognition technologies and pagers for triage nurse.

In addition to the above mentioned efforts to improve provider availability and ensure their appropriate utilization, and increase clinic productivity, there is significant interest in developing clinic management practices, improving appointment scheduling processes, and further developing Fleet/Marine Corps Liaison Programs:

—A clinical management course is in progress throughout Navy Medicine. The course provides guidance on incorporating business rules, developing roles and responsibilities of the different clinic staff, using data systems, monitoring population health, and developing appointment scheduling templates and schedule management. The course emphasizes clinic organization and operations that will maximize efficiency for patent care.

—Appointment scheduling processes focus on improving bookable hours (the actual time available for appointments). Many clinics have altered their clinic hours or have changed appointing procedures to maximize bookable hours. Several sites have implemented web-based appointing and other e-health initiatives to improve patient access. We have received favorable reports from Naval Medical Clinic Patuxent River regarding open access appointing.

—Fleet/Marine Corps Liaison Programs—There is continued development within most commands reporting full-time liaison with direct access to senior leadership. Proactive measures to identify and meet the health care needs of oper-

ational forces include advance consult reviews, pier side visits, senior leadership visits and appointing privileges for liaison staff. A Fleet/Marine Liaison instruction is currently under review.

Question. Do funding constraints keep you from optimizing your system?

Answer. Yes, funding constraints are affecting the rate at which we can optimize the Navy Medical System. While we have done a number of optimization improvements, we do not have adequate funding to initiate some basic improvements like two exam rooms per provider, adequate support staff, and support for accurately coding patient encounters. These optimization efforts require continuous and reliable infusion of capital if we are to be successful.

Question. Would a "venture capital" fund, or a "Surgeon General's Investment and Initiative Fund" allow you to operate your system more smartly and at less expense?

Answer. The operating budget for Navy medicine's direct care system has grown steadily over the past several years. However, this growth has been barely sufficient to support new or expanded benefits as well as new programs. Fiscal discipline and sound financial management at all levels of the organization have been necessary to ensure a consistent level of health care services. Navy medicine has lacked the resources and financial flexibility to make strategic investments that will provide long term stability.

Private sector medical organizations recognize the need to make ongoing invests which produce future revenues. The current budget structure for Navy medicine does not offer a similar opportunity. The establishment of a Surgeon General Investment Fund would provide a vehicle for financing moderate to long term investments that can be supported by a disciplined business case analysis process.

Establishment of such a fund would require specific guidance from Congress to ensure the monies were used for the intended purpose. The fund must be clearly identified as separate from the O&M,DHP account, and funding for the direct care system cannot be offset because investment funds are provided. Multi-year, "no color" funds would provide maximum flexibility. Each of the Surgeons General should be provided an investment fund to avoid non-productive competition for the available dollars. Use of the fund would be predicated on a sound business case analysis. Periodic reports to Congress would appropriately include the business case analysis for each investment, the execution status, and the monitoring for Return on Investment.

Such an investment fund could have a wide range of applications. For example, it could be used to procure digital radiology for all of Navy medicine. This would provide efficiencies in how x-rays are read, stored, and distributed. Other optimization efforts would also be logical candidates for the investment fund.

A Surgeon General Investment Fund would provide an appropriate vehicle for supporting business driven decisions with a moderate to long term Return on Investment.

Question. If such a fund were established, please explain how the "best business case" approach would be used to identify, select and fund projects.

Answer. Navy Medicine relies heavily on the philosophy and concepts associated with a strong business case analysis process. For over a year, the Bureau of Medicine and Surgery (BUMED) has had a formalized process and management structure to be used at the headquarters level as well as the clinic level. The documentation and processes can be found on the Navy Medicine web site (https://bumed.med.navy.mil/med03/tools/default.asp).

The strategic element of a business case analysis is harvesting the potential opportunities and using the analysis to lead to correct decision making. Our commands remain very active in formulating new and innovative ways of doing business either at the local military treatment facilities or impacting on the entire Navy Medicine System. The Department of the Navy recently articulated its Business Values and Goals (BVG) in a major step toward transforming our business culture and practices. In short, the Department of the Navy Business Vision states that the Department will continue to provide the dominant global naval force and develop future capabilities to safeguard the nation. It will achieve this vision through:

—*Innovation*.—Continually fostering conceptual, technological, and operational superiority.

—*People*.—Recruiting, engaging and retaining the best people—military and civilians.

—*Decision Support Systems*.—Deliver recognizable value for every dollar spent.

—*Organizing Work*.—Creating business environment focused on teamwork and outcomes.

The release of BVG is opportune as we in the Navy Medical Department seek to refine our focus on Best Business Practices. Our fiscal realities dictate that we de-

rive the best value per dollar spent through the application of best business practices. Values may be viewed in terms of reduced cost, reduced cycle time, improved quality, increased productivity, or increased return on investment.

Objectives falling under our Best Business Practices goal clarify my expectations—Consistent, complete, relevant, timely and reliable data on cost and performance will come through as an imperative. We expect all of Navy Medicine to explore civilian and military health care innovations and business practices and rapidly adopt those that have demonstrated success. BUMED has introduced a Best Business Practice section on our homepage (https://bumed.med.navy.mil/med08/bestpractices/bestPractices.htm) to facilitate this.

ORGANIZATIONAL REFORM

Question. Would the creation of a "Joint Medical Command" or a USMEDCOM" remedy some of the problems experienced with DOD medical programs?

Answer. Any reorganization effort alone will not solve chronic financial shortfalls in the Defense Health Program. A combination of a new organizational structure, better business practices, and an improved purchased care contracting strategy will together strengthen the Defense Health Program, but must be accompanied by addressing the financial baseline.

Question. Is there clean authority and accountability in the DOD medical programs today?

Answer. There are not clear lines of authority and accountability in DOD medical programs today, outside of Service command and control relationships extant in each medical departments' own organizational structure. For the Defense Health Program, resources and policy flow from an organization with no command and control over the healthcare system. This has been problematic in attempts to establish regional healthcare markets where multi-service military treatment facilities combine with centrally managed healthcare contract funds to provide care and control costs. Support and coordination of readiness requirements often conflict with attempts to minimize purchased care. The current organizational structure does not facilitate resolution of this conflict at a single office.

Question. Would a "USMEDCOM" foster better lines of responsibility for DOD medical programs?

Answer. A CINC or USMEDCOM, if constructed under Joint doctrine, would foster better lines of responsibility for DOD medical programs by having direct command and control where needed. A set of regional Joint Medical Task Forces (JMTF), with command and control over all military treatment facilities and funding for purchased care, would be in a position to optimize care and control costs in a given region.

Service Component Commanders, under command and control of the CINC, would be required to deliver to each JMTF a fully funded and ready military treatment facility, capable of meeting its readiness mission and delivering a defined capacity of medical care. To make this executable, all Direct Care system funds must flow through the Service Component Commanders. The JMTF commanders, to meet the remainder of regional health care demand, must have control over all purchased care funds.

RECENT TRICARE SATISFACTION SURVEY

Question. Have there been recent improvements in customer satisfaction with TRICARE? What remains to be done to further improve satisfaction with the TRICARE program?

Answer. Yes, there has been steady improvement in customer satisfaction as reported in the 2001 Stakeholders Report—an independent evaluation of TRICARE provided by the Center for Naval Analyses and the Institute for Defense Analyses. In the eight regions where TRICARE data is available for at least a year or more, our patients report that it is easier to get an appointment and there is a shorter waiting period to see providers. We are seeing increased satisfaction with the quality of care and note that the satisfaction increases as our patients become more familiar with TRICARE.

My Commanding Officers are all aware of the emphasis I place on customer service and the realization that our challenge and efforts in this area will never diminish. I have the ability to view what their patients report on a monthly basis and take pride in the steady improvement that I have seen in the data. For example, I was pleased when Naval Hospital, Jacksonville was recognized by TRICARE Management Activity as the number one military treatment facility in the area of customer service for fiscal year 2000.

MEDICAL RECRUITING AND RETENTION

Question. How is your service doing in recruiting and retaining medical professionals?

Answer. The status of Medical Corps recruiting and retention must look separately at trained specialists and at scholarship programs.

Recruiting and retaining fully trained specialists are difficult, especially for the critical wartime specialties. While the overall annual Medical Corps loss rate is around 10.5 percent, annual loss rates for fully residency-trained specialists clusters around 20 percent. Some communities historically can only achieve 80 percent manning (general surgery, orthopedic surgery). The Officer Community Manager (OCM) at Naval Personnel Command projects that 11 of 23 communities will fall below 90 percent manning by fiscal year 2007. The Center for Naval Analysis (CNA) report "Physician Satisfaction Survey" documented that unobligated retention rates have significantly decreased since fiscal year 1992, and that higher military-civilian pay-gaps are associated with lower unobligated retention. Physicians leaving the service cite increasing pay differentials with their civilian counterparts, along with other dissatisfiers. The Center for Naval Analysis is conducting a 3-phase Health Professions' Retention-Accession Incentives Study (HPRAIS) to provide a more indepth analysis of the effectiveness of retention and accession initiatives. We are reviewing the results of Phase 1 of this study and planning necessary actions.

About 94 percent of our Medical Corps officers, and hence specialists, enter the Naval Service through the Uniformed Services University Health Services (USUHS), the Armed Forces Health Professions Scholarship Program (AFHPSP) and the Financial Assistance Program (FAP). Data suggests longer time in uniformed service prior to completing specialty training predicts longer service on active duty as a specialist.

Applicant pool and funding determine whether USUHS, AFHPSP and FAP will deliver sufficient numbers of appropriately qualified physicians. Total U.S. medical school applications are down significantly, increasing the competition for the most qualified applicants. Qualifications remain high for selectees for USUHS and AFHPSP, but declining applicant numbers and quality are concerning. Of more immediate concern is that funding for AFHPSP and FAP appears to be falling behind rising program costs. Fiscal year 2001 recruiting goals for AFHPSP (320) and FAP (51) required to meet future requirements may have to be revised downward because of funding limitations.

For the Dental Corps, we are beginning to experience degradation in our ability to recruit and retain dental officers in the Navy. After a decade of being significantly undermanned we were able to achieve full end strength in fiscal years 1999 and 2000. This was accomplished as a result of aggressive recruiting efforts, new Health Professions Scholarship Program opportunities and legislative pay initiatives from fiscal years 1997 and 1998. However, as of February 1, 2001 we are down to 97 percent of end-strength, a shortfall of approximately 40 Navy dentists. Data available to us, such as a 44 percent increase in resignation requests from junior officers over last year, indicates that this trend will worsen over the next 3–5 years if there is no intervention.

The Navy Nurse Corps has met recruiting goals for the past 10 years. Higher than expected retention rates over the past four years have kept recruiting targets at manageable levels, even in the face of a developing nationwide nursing shortage. As the shortage has worsened, nurse recruiters have increased efforts by using Nurse Corps volunteers from active and reserve units who desire to help recruit nurses into the Navy. The volunteers speak at high schools, nursing schools, and professional nursing conferences. The accession bonus is critical to our efforts to recruit nurses.

In the Medical Service Corps, we are currently on target to meet recruiting goals in less than half our specialties. We have good recruiting success when we offer scholarship and internship options, but funding only permits us to offer such options to less than 20 percent of our recruits. Although optometrists, pharmacists, psychologists and environmental health officers present the greatest challenges at present, we are also having difficulty recruiting enough health care administrators, audiologists, industrial hygienists, entomologists, and microbiologists. Although our overall loss rate is about nine percent, our success varies greatly between specialties. Our licensed professionals and doctorate prepared specialties have rapidly increasing educational debt loads and a substantial pay gap between the private sector, which are adversely affecting retention. Because we have been meeting the greatest needs by offering educational incentives, we are recruiting, training, then losing our experienced professionals to the private sector. This is leaving us with

limited experience or gaps of up to 20–45 percent in fields such as optometry, psychology, pharmacy, and some advance health care administrator specialties.

For Hospital Corpsman and Dental Technicians, currently the U.S. Navy recruiters can fill all quotas given to them. However the quotas given to the recruiters have not been sufficient to fulfill our requirements. Numerous shortages exist in our inventories impacting our peacetime and wartime capabilities. A plan was submitted to the Chief of Naval Personnel to increase enlisted accessions to recruit to our requirements.

Question. Is the current special and incentive pay structure adequate to keep your force manned?

Answer. Recruiting and retention are most difficult for the specialties where the gap between military and civilian pay is highest. The Center for Naval Analysis (CNA) report "Physician Satisfaction Survey" documented that inadequate pay was the top reason for dissatisfaction with continued service. In a supplemental report, "Comparison of Navy and Private-Sector Physicians' Total Compensation, by Medical Specialty," CNA found that Navy physicians' compensation is 2–56 percent below comparable civilian compensation by specialty and similar career points. While CNA also found total career compensation for 20-year retirement-eligible Navy physicians who work in the private sector until age 65 comparable to civilian physicians, 86 percent of physicians forego retirement eligibility to leave service early for civilian practice with its higher salaries.

Data also shows that as the military-civilian pay gap increases, physicians without remaining service obligation are more likely to leave service.

Calculated median retention by source of accession supports the notion that specialists exit early. Overall, the median length of non-obligated service for specialists averages only 4.4 years. That average drops to 2.9 years when Uniformed Services University accessions are excluded.

Source of Entry	Percent of Accessions	Median Lengths of Retention (in years) from:		Median Length of Non-obligated Service[1] as a Specialist
		Start of Active Duty	End of Initial Service Obligation	
Uniformed Services University	12.8	17.5	10.5	9.0
AFHPSP—Direct Entry	56.7	8.5	4.5	4.0
AFHPSP—1 year delay	7.4	4.5	1.5	4.0
AFHPSP—NADDS	13.3	4.3	1.3	1.5
Direct Accessions	3.8	6.0	4.0	4.0
Voluntary Reserve Recall	2.5	9.0	7.0	7.0
Financial Assistance Program	3.7	3.8	1.8	1.3
Weighted Average	.....	8.5	4.6	4.4

[1] No obligation for initial service or training.
AFHPSP = Armed Forces Health Professions Scholarship Program.
NADDS = Navy Active Duty Delay for Specialty-training.

For Navy Dentistry, the current special pay structure is not adequate to keep it fully manned. Two factors are the primary contributors to this. First, many of our dentists, especially junior officers, suffer under crushing debt burdens. We are only able to bring 60–70 percent of our new dentists onto active duty under the Health Professions Scholarship Program meaning that the remainder typically have significant educational loans. Servicing this debt burden, which frequently exceeds $100,000, on a junior officer's income is a distinct hardship. (Note—Educational loan debts for dentists were highlighted during testimony before the Senate Finance Committee on February 14, 2001) Secondly, there is a well established pay gap between military dentists and their civilian counterparts. In some instances this pay gap is over 70 percent.

For the Nurse Corps, we believe not. Currently, only nurse practitioners, midwives and nurse anesthetists receive any type of special pay for retention. Although the existing special pays have been successful retention tools thus far; the civilian-military pay gap in some fields continues to grow, most notably for the entry-level certified nurse anesthetists. In order to more accurately gauge compensation gaps for both generalist and advanced practice nurses, the Nurse Corps is included in the Center for Naval Analyses study on Health Professions Retention/Accession Incentives. Results of the study will provide a tool for future strategies. Further retention bonuses and flexibility to use these bonuses may be needed to retain all types of nurses as competition increases for the dwindling supply.

For the Medical Service Corps, special pays have not been updated for over 10 years and some pays, such as optometry special pay have not been updated in 20 years. At its present rate of $100 per month, the optometry special pay no longer assists with retention. Special pay and accession bonuses have recently been approved by Congress for pharmacists but have not yet been funded. Expansion of educational debt repayment options could significantly benefit both recruitment and retention.

For the Hospital Corpsmen and Dental Technicians, retention needs to remain a priority and the best way we can accomplish this is to increase program dollars to ensure that our enlisted communities receive additional special duty assignment pays and reenlistment bonuses.

Question. Where do you have the most difficulty recruiting and retaining medical professionals?

Answer. Recruiting and retention are most difficult for the specialties where the gap between military and civilian pay is the highest.

Question. What specialties are most undermanned?

Answer. The most undermanned specialties currently are general surgery and all surgical subspecialties, orthopedic surgery, diagnostic radiology, anesthesiology and urology.

Many of these specialties are critical wartime specialties and shortfalls could have a negative impact on medical readiness. In a peacetime setting, we augment services in these specialties by using civilian providers at a substantial cost to the MTF/Military Health System.

The following military physician specialties are experiencing shortages within Navy Medicine:

	Percent manned
Surgical Critical Care	8.0
Adolescent Medicine	30.8
Neurosurgery	78.5
General Surgery	77.0
Radiology	81.0
Cardiothoracic Surgery	31.0
Gastroenterology	86.0
Orthopedic Surgery	86.0
Urology	83.0

For the Dental Corps, the greatest retention challenges are for junior dental officers at the end of their initial active duty obligation and recently trained specialists at the end of their active duty obligation for training. We are fortunate to have the majority of our specialties manned at authorized levels. This is largely the result of the Dental Officer Multi-year Retention Bonus. It should be noted that the obligation period for many of these bonus contracts expires October 1, 2002 and we anticipate a wave of resignations and retirements when this occurs. As always, recruiting minority and female dental officers is problematic, but the subject of intense efforts.

The Navy Nurse Corps has the most difficulty recruiting Certified Registered Nurse Anesthetists, and experienced perioperative; maternal-infant, psychiatric and critical care nurses. Shortages in these specialties also exist in the civilian sector where "sign-on" bonuses and generous salary packages make it very difficult to recruit theses nurses into the military.

In the Medical Service Corps, we have not met recruiting goals for optometrists for at least 10 years and are having difficulty retaining the ones we do recruit. Other licensed clinical professionals such as pharmacists, and psychologists have traditionally also been difficult to recruit and retain but we are having some recruiting success with current scholarship and training incentives for these communities. Retention continues to be an issue for psychologists however. Although optometrists, pharmacists, psychologists and environmental health officers present the greatest challenges at present in the Medical Service Corps, we are also having difficulty recruiting enough health care administrators, audiologists, industrial hygienists, entomologists, and microbiologists. Overall, the Medical Service Corps is well manned at present but our concern is that increasing educational debts and civilian pay disparities are causing both recruitment and retention problems which could rapidly change our balance. The specialties most undermanned at present are optometrists, biochemists, and some health care administrator subspecialties.

The most difficult area for recruiting in our enlisted community are the Morticians. Unlike our other Navy Medicine enlisted members there is no Navy equivalent school for this specialty so we have to recruit from the professional sector vice recruit from within. Retaining Sailors in specialized areas such as Reconnaissance Corpsman, Laboratory, Psychiatry, Respiratory, Physical Therapy and Surgical

Technicians remains difficult. Increased special duty assignment pay and reenlistment bonuses would not only enhance program management, but also retain and attract our most talented Sailors.

QUESTIONS SUBMITTED BY SENATOR RICHARD C. SHELBY

Question. What is the status of demonstration projects that seek to address these problems? Retiree and dependent access to military healthcare in remote areas has become problematic. I know this is true in a number of areas, including rural areas of Alabama. I would like to ask each of the members of panel one to comment on DOD plans to meet the healthcare needs of military personnel, dependents and veterans living in rural areas with no local access to military healthcare facilities.

Answer. Navy and Marine Corps personnel stationed 50 miles from a military treatment facility are currently covered under a health care program called TRICARE Prime Remote. This program, which started in 1996 and became effective throughout the country on October 1, 1999, was developed to provide the "Prime" benefit to eligible Active Duty Service Members in remote areas. Several surveys reported widespread dissatisfaction among active duty members in remote areas in regard to excessive travel time for medical care and claims processing delays. This program has been expanded to cover Family members beginning October 2000.

We are aware that all of our beneficiaries do not live near military treatment facilities. The TRICARE Management Activity (TMA) and our Regional Lead Agents monitor access to determine if providers are not seeing our beneficiaries. One indicator we monitor is the physician participation rate. The most recent report shows that physicians are participating in 96 percent of all TRICARE claims; that is, there is no balance billing of beneficiaries on 96 percent of the claims filed under TRICARE. This is an all time high level of physician acceptance of our payment rates and billing procedures. In addition, TMA monitors the adequacies of the networks that the managed care support contractors are required to develop. When we become aware of areas where providers do not accept Medicare or TRICARE, we work with the Regional Lead Agent to provide options for care to the beneficiary.

We also have a number of partnerships with the Veteran's Administration. Their Hospitals are key members of our TRICARE networks. The Veterans Administration facilities also contribute greatly by caring for active duty patients with head injuries for expeditious care and rehabilitation.

Even with the coverage of civilian provider networks, participating providers, TRICARE Prime Remote, Veteran's Administration facilities and Designated Providers there are still areas that we must station our active duty force where there may be a paucity of services. We continue to identify these areas and work hard to meet their needs and the needs of their families.

Question. The committee is aware that significant effort has been directed during the past two years to analyze, understand and incorporate some commercial best practices for administering prescription drug benefits. I would like to ask each of the members of panel one to update the status of DOD's review of commercial best practices and DOD's view on incorporating some of these practices for administering prescription drug benefits.

Answer. Department of Defense (DOD) has incorporated or is in the process of incorporating several commercial best business practices aimed at providing a uniform, consistent and equitable pharmacy benefit while optimizing available resources. A few are highlighted below:

—The Pharmacy Data Transaction Service (PDTS), developed and implemented by TMA, is a centralized patient prescription profile that integrates prescription data from all DOD direct care pharmacies, the National Mail Order Program (NMOP), and the TRICARE Managed Care Support Contractors retail pharmacy networks. The PDTS ensures that any prescription filled for a TRICARE beneficiary is checked against all other prescriptions for that beneficiary. The PDTS helps to assure that patients do not receive duplicate prescriptions or prescriptions for drugs that interact negatively with other drugs. PDTS significantly enhances the ability of the doctor and pharmacist to prevent medication errors and provides DOD with aggregate prescription information that can be used to assess and identify cost saving measures and enhance patient care decisions.

—Restructured/simplified tiered pharmacy benefit copayments for use of the NMOP and retail pharmacies (effective April 1, 2001) which closely mirrors copayment structures in the commercial best business practice of pharmacy.

—Continue to pursue joint ventures with Veterans Administration (VA) in the areas of joint pharmaceutical contracts, where clinically appropriate.

DOD/VHA are exploring the feasibility of utilizing VA's Consolidated Mail Outpatient Prescription System (CMOPS) to process refills generated through our direct care pharmacies; alleviating congestion at MTFs and providing relief to understaffed military pharmacies.

Question. Admiral Nelson, 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. Acute Lung Injury Research is a topic area in the fiscal year 2000 Congressional language for the Peer Reviewed Medical Research Program. This program is managed by the U.S. Army Medical Research and Materiel Command as part of the Congressionally Directed Medical Research Program. For fiscal year 2000, there were 20 proposals received for acute lung injury research. These proposals underwent a two tiered review process, including scientific peer review and programmatic review. None of the 20 proposals were selected for funding. Acute lung injury research will also be a topic area for the fiscal year 2001 program.

The Naval Health Research Center Toxicology Detachment, at Wright-Patterson Air Force Base, had animal model research into acute lung injury until this fiscal year. Funding was not continued, and the research has ceased.

A study by the National Institute of Occupational Safety and Health (NIOSH) assessed incidence of sarcoidosis among Navy enlisted personnel and suggested a relationship of sarcoidosis with assignment aboard aircraft carriers. Navy has initiated a Congressionally-funded study through Navy Health Research Center to correlate results of the NIOSH study with a pathologic review of tissue samples at the Armed Forces Institute of Pathology taken from naval personnel during the 1960s and 1970s. While not a study of "acute" lung injury, this information may be of interest as well. The study is in the very earliest stages, and no data are available.

QUESTIONS SUBMITTED BY SENATOR KAY BAILEY HUTCHISON

TRICARE BUSINESS PRACTICES

Question. Last year I asked if the amendment that provided for increased reimbursement levels for TRICARE was adequate, particularly in areas where our military personnel could not get a provider to see them. I was told last year that we had seen an improvement by all three Surgeons General. Additionally, reports from Dr. Clinton's office also say that providers and patients are happier, but I can tell you though that is not the information that I am receiving form my constituents to include patients and providers. May say they cannot locate a provider that will accept TRICARE for the very reasons that we talked about before, inadequate reimbursement, delay in payment and inadequate fee structures that do not compare with their civilian counterparts. Currently TRICARE reimbursement is at the 45 percent rate allowable, like MEDICARE reimbursement. It is my understanding that under the old CHAMPUS program, providers were reimbursed at 80 percent. An increasing number of MEDICARE providers are leaving networks because of this low reimbursement rate.

Gentlemen is this adequate?

Answer. Through the Managed Care Support Contractors, the TRICARE Management Activity (TMA) and our Regional Lead Agents we monitor access to determine if providers are not seeing our beneficiaries. One indicator we monitor is the physician participation rate. The most recent report shows that physicians are participating in 96 percent of all TRICARE claims; that is, there is no balance billing of beneficiaries on 96 percent of the claims filed under TRICARE. This is an all time historically high level of physician acceptance of our payment rates and billing procedures. In addition, the TMA monitors the adequacies of the networks that the managed care support contractors are required to develop. The contractors are required to provide to TMA and the Regional Lead Agents a quarterly report on the status of the network and the activities they are taking to ensure that an adequate number of providers, with space, are available for our beneficiaries.

Question. Will this impact the number of providers available to our over 65 year old beneficiaries?

Answer. Because Medicare is the primary payer, because TRICARE's reimbursement rates are tied to Medicare's rates, and because Medicare's reimbursement rates are widely accepted by physicians, we expect high levels of physician participation and access to needed health care services.

Question. In areas such as Dallas, which has approximately 100,000 beneficiaries, and there is not a "military" medical treatment facility, how are we addressing issues of access to providers?

Answer. The managed care support contractor in Region 6, Health Net Federal Services, is required under their contract to establish a TRICARE Prime network in the Dallas-Ft. Worth area. The most recent network adequacy report documents a strong network of primary and specialty care providers totaling over 1,900. Recent surveys and contractually-required reports from Health Net Federal Services indicate that access standards are being met, and 90 percent of the network providers have open panels and are accepting new patients. Also, CMAC rates for 2001 increased approximately 4 percent in the aggregate, while some "difficult to obtain" specialties' reimbursement rates were increased even more.

We also monitor physician participation in the TRICARE Standard program, and are pleased to report that it is above 90 percent. By "participation", we mean that on 90 percent of all TRICARE claims filed for this area, there is no balance billing of the beneficiaries.

Question. Some of my constituents are concerned about the quality of provider you get when you reimburse at 45 percent as opposed to 80 percent. Are you offering our soldiers and their families the best of the best medical care or second rate medical care through TRICARE?

Answer. We always strive for and truly believe our beneficiaries deserve the best of the best. Department of Defense's reimbursement rates are established pursuant to Section 1079(h)(l) of Chapter 55 of U.S.C. Title 10. This statutory provision states that the TRICARE maximum physician payment amounts should be set at no more then Medicare's level of physician payments. We think that TRICARE maximum allowable payment levels (known as the CMACs) are equal to about 58 percent of the providers' billed charges, not 45 percent. Due to provider network discounts, the actual payment levels are about 50 percent of billed charges. This is consistent with many private insurance payers, who have established rate schedules that are considered reasonable even though actual payments are less than billed charges. The inception of TRICARE marked the first time that defined networks of credentialed providers were available to our beneficiaries. Prior to TRICARE, beneficiaries relied on yellow pages and word of mouth for providers. Those providers that accept TRICARE and are in our TRICARE Networks must meet tough requirements in our credentialing process, as required by our contracts, before they can see our beneficiaries. Network physicians are typically Board-certified. We believe the quality of care through TRICARE is higher than ever before because of these credentialing requirements.

Question. What do you believe are the key issues in attracting and retaining providers?

Answer. For Active Duty Physicians, the Center for Naval Analysis (CNA) report "Physician Satisfaction Survey" prioritized the top reasons cited by physicians for dissatisfaction with continued service:

—Insufficient Monetary Compensation.
—Inadequate Administrative and Technical Support.
—Devaluation of Clinical Excellence.
—Poor Business Practices.
—Decreasing Professional Growth Opportunities/Career Issues.
—Lack of Recognition and Value of Physician Contributions.

For the Dental Corps, the Health Professions Scholarship Program (HPSP) has been the single most useful tool for attracting dentists to the Navy. We consistently have 3 times as many applicants as we have scholarships to award. Unfortunately, the dental 4-year HPSP scholarship has been in existence for a short period of time and only accounts for approximately 60 percent of our new accessions each year. In contrast, the Medical Corps attracts over 90 percent of new accessions with the HPSP scholarship. Because of this, a significant percentage of our corps is still burdened with the staggering debt accumulated during dental school (average debt > $80,000). To retain these experienced, well-qualified dental officers, we will need to dramatically increase both military pay and benefits. The pay disparity between military and civilian dentists continues to grow as an on-going study by the Center for Naval Analysis has demonstrated. Their findings indicate a "pay gap" ranging from 24 percent to over 70 percent depending on time in practice/service and whether or not the individual is a general dentist or a specialist. When junior officers were queried as to the amount of pay increase it would take to make them "likely to remain on active duty" the dollar amount exceeded $12,000 annually.

For the Nurse Corps, compensation is one factor and a powerful driver in a nurse's decision to enter or remain in the service. Other significant factors include teamwork, opportunities for advanced education, promotion and quality of life issues, including child care, housing, benefits, and workload.

In the Medical Service Corps, scholarship options, training opportunities and the type of work experience and diversity we offer are key issues in both attracting and

retaining providers. While these factors attract high caliber professionals to the Navy, maintaining adequate pay comparability is critical to both recruitment and retention.

Civilian TRICARE Network Providers

In reference to TRICARE network providers, the three major ingredients have been and continue to be: (1) adequate reimbursement rates; (2) prompt payment of claims; and (3) a reduction in the administrative requirements. The TRICARE Management Activity along with staff from each of the Surgeons General offices have made great strides over the past year in improving prompt payment and reducing administrative problems. Through these combined efforts, claims deferrals have declined, over 100 pre-pay edits have been eliminated, the number of claims adjustments have been reduced, and auto-adjudication rates have increased. Along with TMA, Navy Medicine is continuing to look at additional ways of improving service to our TRICARE network providers. Future improvements aim toward increasing the ability to use Electronic Media Claims, In Office Adjudication processing which would provide instant feedback to the provider and a number of internet applications for Claims Customer Service such as the one used by Palmetto Government Benefit Administrators (myTRICARE.com) and claim submissions. There may always be a few areas of the country where the CMACs will be considered insufficient. There are criteria for requesting waivers to CMAC rates where there is severe impairment of access to health care as a result of our CMAC payment rates. However, we continually monitor physician participation rates, and the latest report indicates a 96 percent rate. That is, on 96 percent of TRICARE claims filed, there is no balance billing to the beneficiaries.

TRICARE FOR LIFE

Question. I can tell you that the TRICARE For Life is a most welcomed program for those retirees that we made the promise to so many years ago. The 2001 National Defense Authorization Act, calls for the implementation of the pharmacy benefit on 1 April 2001 and the TRICARE For Life implementation 1 October 2001. A concern that I have is the number of military retirees who never enrolled in Part B of Medicare. This is a requirement of the new plan. An estimated 10 percent of eligible military retirees in San Antonio never enrolled in Part B of Medicare. Medicare eligible retirees who turned down enrollment in Part B face a 10 percent penalty on monthly premiums for every year they are past age 65 when they enroll. For a 75 year old that would be $91 a month, twice as much as someone who enrolled at age 65.

Can you comment on your meetings with HCFA on identifying those who did not enroll in B and what solution is needed to waive this penalty?

Answer. My staff has participated in several meetings, led by Health Affairs (TRICARE Management Activity) staff, with HCFA staff. It is anticipated that Department of Defense (DOD) will be conducting a data match with HCFA this summer that will identify those persons eligible for TRICARE for Life (who must have Medicare Part B). This data match will also provide a list of those military retirees and family members that do not have part B, thus would not be eligible for TRICARE for Life. In reviewing the testimony provided by both DOD and HCFA, we understand that a legislative action would be required to waive the penalties associated with a group of beneficiaries not choosing Medicare Part B when they turned 65 and wanting to purchase it at a later date. I would support a legislative waiver, because it would facilitate our ability to provide the full benefit this group deserves.

Question. What marketing plan is planned to educate the over 65 retirees about TRICARE for Life?

Answer. TRICARE Management Activity in conjunction with the military services has created a detailed marketing and communication plan. The plan uses news releases, web services, marketing materials, and letters and education briefings. Our facilities have access to this information and we have incorporated the briefings into our internal and external communications. TRICARE Management Activity is utilizing all avenues to "get the word out about the TRICARE For Life program" Examples include their weekly meetings with the Military coalition, the mailing of 1.5 million copies of the Senior Pharmacy information trifold and an informative web site that posts frequently asked questions and additional information. The Navy is augmenting this plan with close collaboration among Bureau of Medicine and Surgery, Bureau of Naval Personnel, the Deputy Chief of Staff for Manpower and Reserve Affairs, and Headquarters Marine Corps.

Question. Can you comment on how the implementation of TRICARE for Life will impact your resources? (Physician contacts per year average 12 per year in those

over 65 as compared to 4.6 per year in ages 15–44.) Days of Hospital Care per year average 269 days of care per one thousand persons in those over 65 as compared to 54.6 per one thousand persons in ages 15–44.)

Answer. We recognize that the 65+ beneficiary population consumes significantly more resources than beneficiaries in other age groups. We welcome the opportunity to provide additional care to these beneficiaries, but we have limited remaining capacity in our military treatment facilities (MTF). Our number one priority is the health and well being of our active duty service members to ensure the operational forces are ready to deploy and that our medical personnel maintain the skills necessary to support the operational forces. Our plan is to provide as much care to 65+ beneficiaries as we can in the MTFs while balancing our workload to meet readiness and graduate medical education requirements, and our commitment to our active duty families and other retirees and their families. We will also rely heavily on available private sector care, where Medicare is first payer and TRICARE will be the second payer, to provide services not available in our MTFs. However, the Military Health System's ability to meet the health care needs of a greater percentage of our beneficiary population is contingent upon full funding of our current requirements as well as those new benefits authorized by the Fiscal Year 2001 National Defense Authorization Act.

Question. Gentlemen, will you be able to meet the goals of TRICARE for Life and still be able to provide care to the active force based on your projected budgetary guidelines?

Answer. At this time the Budget has not been submitted. Without that final product it is difficult to state unequivocally that the budget does not have adequate funding for TRICARE For Life (TFL). Our number one priority is the health and welfare of our active duty service members. We must ensure that the operational forces are medically ready to deploy, and that our medical personnel maintain the skills necessary to support the operational forces. Therefore, we must maintain a balanced workload in our military treatment facilities (MTF) that meets our needs for readiness as well as graduate medical education, and our commitment to our active duty families and other retirees and their families. We welcome the opportunity to provide additional care to our 65+ population, but we have limited remaining capacity in our military treatment facilities (MTF). Our MTFs cannot provide all needed services for the over 1 million 65+ beneficiaries eligible for TRICARE for Life. We are confident that the right combination of available MTF care coupled with private sector care (where MEDICARE is first payer and TRICARE second) will not only meet the needs of this population, but of Navy Medicine's commitment to readiness. However, the Military Health System's ability to meet the health care needs of our entire beneficiary population, including those 65+, remains contingent upon full funding of our current requirements as well as those new benefits authorized by the Fiscal Year 2001 National Defense Authorization Act.

MEDICAL PERSONNEL

Question. Are you able to recruit the professionals you need to meet medical personnel requirements (Active and Reserve Components)? (All three services identify recruiting and retention of nurses as an important shortfall).

Answer. Beginning in fiscal year 2003, the Navy Medical Corps will have a manning shortfall. It is projected to worsen through fiscal year 2007 when overall retention of specialists is projected to drop below 90 percent. Virtually all specialties will be affected, but critical wartime specialties will be most affected, i.e., general surgery and surgical subspecialties, orthopedic surgery, anesthesiology, urology and diagnostic radiology. These are the specialties where the gap between military and civilian pay is highest.

The Navy Medical Corps is critically dependent on scholarship programs. 94 percent of Navy physicians are products of the Uniformed Services University (12.8 percent), the Armed Forces Health Professions Scholarship Program (AFHPSP) (77.4 percent) and the Financial Assistance Program (FAP) (3.7 percent). Funding for AFHPSP and FAP appears to be falling behind rising costs. Fiscal year 2001 recruiting goals for AFHPSP (320) and FAP (51) required to meet future requirements are being revised downward because of funding limitations.

From the late 80's until about 2 years ago, the Navy Dental Corps was consistently unable to meet end-strength. Recently, due in large part to the successful use of scholarships, we have been able to meet our recruiting goals for general dentists. Because of the low monetary compensation, however, we have been unable to attract specialists to the military. Additionally, future demographic trends indicate that we will be competing with civilian opportunities for a decreasing pool of applicants.

For the Nurse Corps, we are not able to recruit all the professionals we need. Although we meet our recruiting goals in terms of numbers, we are not able to recruit specialty nurses in the areas of perioperative, maternal-infant, critical care and nurse anesthetists. Therefore we must train to these requirements once the nurses join the Navy.

In the Medical Service Corps, we have good success recruiting to our scholarship and internship opportunities. However, we offer no such incentives for over half our new officer positions and in those cases, recruiting success varies tremendously between specialties. The optometry community has not met recruiting goals for over ten years. Other licensed clinical professionals such as pharmacists, and psychologists have traditionally also been difficult to recruit and retain but we are having some recruiting success with current scholarship and training incentives for these communities. Although we historically have success in most of our specialties, right now we are on target for this year's recruiting goals in only half our specialties. The Medical Service Corps Reserve Components are currently well manned and anticipating no shortages.

Navy Medicine's enlisted member's retention statistics compared to Navy Line communities are slightly higher. The HM and DT communities have been above U.S. Navy percentages in first, second and third term retention rates.

Current retention rates: 1st term HM/DT 52 percent—Line Navy 36 percent; 2nd term HM/DT 51 percent—Line Navy 49 percent; and 3rd term HM /DT 52 percent—Line Navy 48 percent.

Reserve Components

Based on overall manning levels versus funded reserve requirements, the Medical, Dental and Medical Service Corps are accessing members at a level sufficient to meet wartime requirements. However, the Nurse Corps is currently manned below requirements. Reserve nurse shortfalls are predominately in the critical care areas. The Naval Reserve offers incentive programs to nurses with critical care experience.

In addition, both the Medical Corps and Nurse Corps are experiencing attrition that exceeds accessions rates. An in depth assessment of the four officers corps shows there is a need to improve recruiting at the specialty level to meet skills requirements. The most crucial area is the Hospital Corpsman rating. Current reserve inventory is 62 percent of total requirements with an attrition rate that has exceeded accessions for the past several years. The reserve Dental Technician Rating is meeting reserve-recruiting requirements and is manned at 100 percent.

Question. Are medical professionals able to sustain their clinical skills at a high level? (We have funded the Joint Trauma Training Center at Ben Taub, which is a Tri-service program).

Answer. Peacetime case mix for general surgeons does not provide adequate experience with combat trauma injuries. The Joint Trauma Training Center (JTTC) at Ben Taub provides one option for augmenting the peacetime clinical experience for trauma surgeons. The training received has favorably impressed the Navy trauma training coordinator, but one center alone cannot support trauma training for all DOD general surgeons. There is a planned opening of a second center at Los Angeles County Medical Center in 2002, and the Air Force is planning on opening 2 additional centers. Four centers will hopefully provide sufficient training throughput. In addition, training only surgeons in a JTCC/Ben Taub program does not provide combat trauma training for the entire trauma surgical team. Broadening the program scope to train trauma teams is a reasonable next step for project demonstration.

Peacetime caseload supports skill maintenance for most other specialties. Maintenance of medical licenses and credentials is becoming increasingly tied to Continuing Medical Education (CME). The Center for Naval Analysis (CNA) report "Physician Satisfaction Survey" listed decreasing professional growth opportunities as one of the top reasons cited by physicians for dissatisfaction with continued service. Licensure is considered a "requirement for employment," and licensure fees are excluded from reimbursement under U.S.C. The services can and do reimburse costs for board certification, an important credentials item. Most board certificates are now time limited, and renewal requires some combination of re-examination and/or CME. The Navy funds one CME course per year as resources permit. Many mid-level and senior physicians have credentials and board certifications in multiple areas, and their positions require continuously maintaining all credentials and board certifications. The fiscal strain on military health care funding has reduced funding available for CME, resulting in significant constraints on CME opportunities. Civilian health care organizations use CME funding as a competitive recruiting tool. Expanding and fencing funding support for CME may be a cost-effective option to help medical professionals maintain clinical skills, update credentials and improve retention.

For Dental Corps, our general dentists have no problems maintaining their clinical skills. Some specialists—for example, Oral and Maxillofacial Surgeons—who are assigned to some operational platforms, such as aircraft carriers, do experience degradation of their clinical skill levels.

For Nurse Corps, skill sustainment, particularly for wartime roles, is highly dependent on the ability to use the skills in daily patient care delivery. Nurses at the medium to large Navy treatment facilities develop and maintain skills at a high level. Nurses rotate through the larger facilities on a periodic basis, which serves as skill refresher training. Some treatment facilities with lower workload and acuity levels send nurses to the civilian sector for skill maintenance, if there is no military facility nearby for that purpose.

Medical Service Corps Officers and Navy Medicine Enlisted members are able to maintain their operational and technical skills while performing their daily duties.

For the reserve components—The vast majority of Medical and Dental Corps reservists are practicing their specialty in the civilian community on a daily basis and as a rule are very competent. The Medical Service Corps and Nurse Corps is a mixture of practicing professionals and those who must supplement skills maintenance via reserve weekend drills and annual training. Skills are monitored by the Centralized Credentials Review and Privileging Department (CCPD) based on the standards of the Joint Commission on Accreditation of Health Care Organization (JCAHO). Those not able to sustain competence are no longer privileged to practice as a member of the Naval Reserve. Sustainment of clinical skills for reserve Hospital Corpsmen and Dental Technicians is a recognized issue that is currently being addressed. Efforts are underway to enhance training in coordination with Hospital Corps School and CNET. Recruiting policies are being reviewed to enhance the ability to access more clinically active individuals who possess required technical skills.

Question. Does the current medical structure meet military readiness and force projection requirements?

Answer. In terms of total numbers of personnel, Navy Medicine can meet military readiness and force projection requirements, however Navy Medicine does not have the proper mix of specialties. Medical officer deficits exist in Internal Medicine, Orthopedics, and Surgical sub-specialties where General Medical Officers serve as substitutes. Other officer shortages exist in anesthesiology (anesthesiologists and nurse anesthetists) and perioperative nurses. Enlisted personnel have shortages in aviation physiology technicians and reconnaissance independent duty corpsmen.

Question. What have been the military medical requirements for the Balkans, Southwest Asia, and other deployments?

Answer. The following list depicts the deployments (greater than 30 days) of Navy Medicine assets. This list does not include organic assets forward deployed with Carrier Battle Groups, Amphibious Ready Groups, long-term (permanent change of station) assignments to shore facilities worldwide, or exercises (less than thirty days and are part of the normal training cycle).

Task Force Medical Falcon in support of Kosovo Forces: 1 Nurse Anesthetist.

Medical Crisis Support Team—Bahrain: 1 General Surgeon, 1 Orthopedic Surgeon, 1 Anesthesiologist, 1 Operating Room Nurse, 1 Surgical Technician.

Kuwait Army Hospital (rotate with Army and Air Force): 1 General Surgeon, 1 Orthopedic Surgeon, 1 Anesthesiologist, 1 Operating Room Nurse, 1 Surgical Technician.

Provide Hope—Tblisi, Georgia (train local personnel on use of medical equipment donated by the U.S.): 1 Family Practice Physician, 1 Primary Care Physician, 1 Operating Room Nurse, 1 Surgical Technician, 6 Biomedical Repair Technicians, 7 General Duty Corpsmen.

Question. What is the impact?

Answer. There was minimal impact of these deployments on patient access to care in the Medical Treatment Facilities (MTF). Drawing resources from several different Navy MTFs for these deployments reduces the impact on any one Navy MTF. However, some workload does shift from the Navy MTFs to the more expensive civilian network while military providers are deployed.

THIRD PARTY COLLECTIONS

Question. How does the third party collection system currently work with the Military Medical Treatment Facilities?

Answer. The Third Party Collection Program (TPCP) is statutorily enabled to bill health insurers and health benefit plans for medical care provided to family members of active duty personnel, retirees, and retiree family members. The TPCP does not cover active duty members. Claims are prepared based on the diagnostic related group (DRG) coded in the patient's record for inpatient care, much the same as in

a non-government hospital. For outpatient services, a claim is prepared based on the clinic that the patient visited in the Medical Treatment Facilities (MTFs). All Department of Defense MTFs use this methodology. The MTF Billing Office sends the claim to the health benefit plan and reimbursement is subject to the terms of the plan purchased by the patient. When the MTF receives payment, funds are deposited to the current year operating account of the MTF.

Question. What is the impact on Medical Treatment Facilities of providing the medical services and collecting for those services (for example at Wilford Hall and Brook Army Medical Center in San Antonio)?

Answer. Because Wilford Hall and Brook Army Medical Centers are not Navy Medical Treatment Facilities (MTFs) we cannot comment on their Third Party Collection Program (TPCP) operations. However, within Navy Medicine, the TPCP does have a significant impact on the funding available to the MTF. Total Navy billings for fiscal year 2000 were approximately $67 million while at the same time collections for fiscal year 2000 were $24.9 million. These third party collections are equivalent to approximately 2 percent of the MTF operating budgets. At the MTF level funds are used to directly supplement the operating budget of MTFs and Clinics.

Question. Is the money returned to the Medical Treatment Facilities that provided the services?

Answer. The Bureau of Medicine and Surgery monitors billings and collections by MTFs. Collections under the TPCP that are realized at the MTF remain at the MTF. The fact that funding is left at the MTF level and does not become a "corporate level" asset incentivizes the MTFs to pursue collections to the greatest legal extent possible from the local level.

CIVILIAN HEALTH PERSONNEL RECRUITMENT

Question. In your testimony today you have noted problems maintaining enough physicians in the military, are there specific issues or obstacles you face in reference to hiring civilian physicians?

Answer. Yes. Hiring civilian physicians to cover shortfalls in military physicians presents a two-sided problem.

(1) Based on Hay Group compensation data for salaried physicians employed by group practices, HMOs and hospital-based practices, the average annual compensation for comparable civilian physicians would be $268,000. This is $86,000 more than the average total annual compensation for uniformed physicians (CNA Report "Comparison of Navy and Private-Sector Physicians' Total Compensation By Medical Specialty.")

Outsourcing works when excess, lower cost labor is available and fixed-cost infrastructure can be reduced or eliminated. Unfortunately, in most markets, civilian physicians are a labor pool that is not in excess and commands higher salaries. Infrastructure must be maintained, allowing no opportunity to reduced infrastructure or fixed costs.

(2) Hiring civilian physicians increases dissatisfaction among military physicians. In many cases, contract civilian physicians are exempted from after-hours call and weekends watches. Civilian physicians have none of the military responsibilities or ancillary duties of the military physicians, and are not liable for deployment. The military physicians discern that they are paid substantially less for greater workload and responsibility.

Question. Are there similar problems hiring enough support staff for physicians?

Answer. Similar issues are probably germane for support staff. The Bureau of Medicine and Surgery (BUMED) recently completed a staffing analysis addressing clinical support staff assigned to each Primary Care Provider (PCP). BUMED has determined that each PCP has 1.9 clinical support staff available. It is BUMED's goal to increase this ratio to the civilian levels of 3.5 support staff per provider. This goal is also necessary to support DOD's Military Health Systems (MHSs) Optimization Plan, which will recapture workload from contractors.

QUESTIONS SUBMITTED BY SENATOR ERNEST F. HOLLINGS

Question. Under Congressionally Directed Medical Programs, is there on-going research targeted on blood-related diseases such as leukemia or lymphoma? Is blood-related disease research to be consistent with the mission of DOD medical research?

Answer. Congressionally Directed Medical Programs are managed by the U.S. Army Medical Research and Materiel Command. Therefore, Navy defers to Army for this response.

While not specifically under the Congressionally Directed Medical Programs, Navy is involved in a study under the Congressionally Mandated DOD Coastal Cancer

Control Program. This is a collaborative study between the Naval Health Research Center and the Hollings Cancer Center, Medical University of South Carolina. This study will determine the rate of leukemia in active-duty military personnel and compare this rate with rates for the general U.S. population. Risk of leukemia by occupation within the DOD will also be studied.

Cancer studies and studies of other blood-related diseases in active-duty personnel are consistent with the mission of DOD medical research to help ensure a fit and healthy force.

Question. Has any work been done to identify the occurrence rate or prevalence of blood-related diseases resulting from environmental exposure in the theater of war?

Answer. Three research efforts by Navy Research Health Center workers have addressed blood-related diseases in veterans of the Gulf War. These articles address numerous disease categories, including "neoplasms" and "blood diseases". Articles in the peer-reviewed literature resulting from these studies include:

—Gray GC, Smith TC, Knoke JD, Heller JM. The postwar hospitalization experience of Gulf War veterans possibly exposed to chemical munitions destruction at Khamisiyah, Iraq. American Journal of Epidemiology, 1999, Volume 150, pages 532–540.

—Gray GC, Smith TC, Kang HK, Knoke JD. Are Gulf War veterans suffering war-related illnesses? Federal and civilian hospitalizations examined, June 1991 to December 1994. American Journal of Epidemiology, 2000, Volume 150, pages 63–71.

—Gray GC, Coate BD, Anderson CM, Kang HK, Berg SW, Wignall FS, Knoke JD, Barrett-Connor E. The postwar hospitalization experience of U.S. veterans of the Persian Gulf War. New England Journal of Medicine, 1996, Volume 335, pages 1505–1513.

The first-listed study addresses possible exposure to chemical munitions destruction, which is a form of "environmental exposure". In these studies, a link between deployment to the Persian Gulf and later development of "neoplasms" and "blood diseases" was not established.

Question. The National Academy of Sciences and the Institute of Medicine issued a report in January which made recommendations to the Department of Defense about improving the health of soldiers deployed to the theater of war. The Institute's recommendations are compelling and, if implemented, would make a strong commitment to the health of American troops. Are you familiar with the Committee's recommendations? Do any of the individual services, or the Department of Defense, have implementation plans for the any of the Committee's recommendations? If not, why not?

Answer. Navy Medicine considers protecting the health of deployed personnel to be a high priority. Navy is working with the other Services, through the Joint Preventive Medicine Policy Group, to complete work on the Joint Service Instruction on Deployment Health Surveillance and Protection. This document will provide Service implementation policy for Department of Defense Instruction 6490.3, Implementation and Application of Joint Medical Surveillance for Deployments, and will address many of the concerns of the Institute of Medicine Report. It is anticipated that the draft instruction will be ready for final coordination by June 1, 2001.

Navy Environmental Health Center has published Technical Manual NEHC–TM PM 6490.1 (September 2000), titled Implementing Guidance for Deployment Health Surveillance. While this document is non-directive, it serves as interim guidance pending release of the Joint Service Instruction on Deployment Health Surveillance and Protection.

Navy is developing four Forward Deployable Preventive Medicine Units to provide specialized field capabilities in Epidemiology, Health Surveillance, Preventive and Occupational Medicine, Risk Communication, Environmental Health, Vector Control, Microbiology, and Industrial Hygiene (including environmental sampling). These Units will be rapidly deployable and mission specific (task-organized), so operational commanders will have a tailored functional unit available in the theater of operation. FD–PMUs are expected to come on line during fiscal year 2002 through 2005, and will make significant contributions to many of the recommendations in the Institute of Medicine Report.

Question. Vice Admiral Nelson, in the testimony you provided to the Committee you stated that the Navy is committed to optimizing the health care services it provides. You mentioned the Navy completed an analysis of its direct care system and found that many of the Treatment facilities were not optimally staffed or were not functioning at optimal levels. Is the Charleston Naval Hospital functioning at an optimal level? If not, will you comment on the challenges facing the Charleston Naval Hospital in providing services to the Charleston metropolitan area? How will the

changes to the TRICARE system affect services being provided at Charleston Naval Hospital?

Answer. Over the last 3 years Charleston Naval Hospital has been one of the Navy's leaders in re-engineering for optimization. With the help of Palmetto Government Benefits Administrators (PGBA) we formed a model partnership with the Trident Hospital System for inpatient services. We seamlessly integrated the over 4,000 Navy Nuclear Power Training Command personnel into receiving health care services as that Command moved from Orlando, FL to Charleston. We increased access and beneficiary satisfaction through the implementation of a new appointment and scheduling system. The hospital has earned both the DOD access award, as judged by responses of beneficiaries and the Federal Executive Association's Team Award.

Changes to the TRICARE system will require some adjustments of the services that are currently delivered to the over 65 population in the Charleston area but the impact should be minimal. In fact, there have historically been 1,500 to 2,000 over 65 beneficiaries empanelled at Charleston. Most of these beneficiaries were patients during the time the Family Practice training program was open. The hospital has continued to provide this population with primary care and outpatient specialty services. Naval Hospital Charleston will continue to do so. TRICARE for Life provides our very important beneficiaries with an excellent benefit for which Naval Hospital Charleston will do their part.

The current facility was constructed in 1973 and is configured as a general hospital for a population far in excess of the current beneficiary population in Charleston. A new ambulatory care "super-clinic" if constructed at the Naval Weapons Station, Charleston, in proximity to the Navy Nuclear Power Training Command, would optimize outpatient care delivery to our current beneficiaries.

QUESTIONS SUBMITTED TO LT. GEN. PAUL K. CARLTON

QUESTIONS SUBMITTED BY SENATOR TED STEVENS

FISCAL YEAR 2000 SUPPLEMENTAL

Question. How much relief has your direct care system received from the fiscal year 2000 Emergency Supplemental?

Answer. The fiscal year 2000 Emergency Supplemental provided funds for several different years, though most went against fiscal year 2000–2001 requirements. The Air Force Medical Service (AFMS) received $37.8 million of the $148.1 million, which was used to fund fiscal year 2000 direct care requirements. None of the supplemental was used to fund fiscal year 2001 direct care requirements.

Question. What happens when your MTFs are the first to pay the bills, or the last to receive any funding relief?

Answer. There is absolutely no flex in today's funding levels. Every dollar intended for the direct care system that is directed elsewhere comes at the expense of our facilities' infrastructure, medical equipment, and supplies necessary to provide direct patient care.

CURRENT YEAR DHP FUNDING SHORTFALLS

Question. Do you have enough funds to fully execute your fiscal year 2001 program? Where are your shortfalls?

Answer. The Defense Health Program (DHP) is experiencing a $1.4 billion shortfall. The AFMS' share is $158 million. These shortfalls do not include $72.5 million in unfunded fact-of-life requirements such as pharmacy growth, skyrocketing fuel costs, and Air Evac overruns based both on fuel costs and increased flying hour costs. Another $37 million was recently advanced from our 4th quarter funding line to pay for requirements driven by the Fiscal Year 2001 National Defense Authorization Act. We are concerned about these shortfalls and are working with our line and department leadership to resolve them. Current funding levels will lead to a significant impact on direct care services in early July 2001. If we are not able to continue current levels of service, patients will be referred to the civilian sector, at a higher cost to the government. We will potentially see this pattern reflected in higher private sector care bills in the out-years.

Question. Is your direct care system fully funded in fiscal year 2001? How will your fiscal year 2001 shortfalls impact delivery of care in your hospitals and clinics?

Answer. The DHP is experiencing a $1.4 billion shortfall. The AFMS' share is $158 million. These shortfalls do not include $72.5 million in unfunded fact-of-life requirements such as pharmacy growth, skyrocketing fuel costs, and Air Evac over-

runs based both on fuel costs and increased flying hour costs. Another $37 million was recently advanced from our 4th quarter funding line to pay for requirements driven by the Fiscal Year 2001 National Defense Authorization Act. We are concerned about these shortfalls and are working with our line and department leadership to resolve them. Current funding levels will lead to a significant impact on direct care services in early July 2001. If we are not able to continue current levels of service, patients will be referred to the civilian sector, at a higher cost to the government. We will potentially see this pattern reflected in higher private sector care bills in the out-years.

TRICARE FOR LIFE

Question. To arrive at a cost for "Tricare for Life", has DOD used accurate assumptions for medical and pharmacy inflation rates?

Answer. Per the TRICARE Management Activity (TMA), DOD calculated the TFL cost estimates for fiscal year 2002 based on the most current inflation rates available. These rates are consistent with the recent Congressional Budget Office (CBO) testimony before the Committee on Ways and Means, Subcommittee on Health, on March 27, 2001. The Department assumed a 15 percent total cost growth for pharmacy between fiscal year 2001 and fiscal year 2002 (approximately 10 percent inflation and 4.5 percent increased utilization). DOD assumed a 4 percent cost growth for TRICARE benefits not covered by Medicare and as second payer to Medicare (beneficiary coinsurance and deductible).

Question. On October 1st where do you believe retirees will go for their new benefit to the MTF or in the network?

Answer. TRICARE For Life is an exciting step towards restoring the promise made to these great American patriots by opening the doors of our military treatment facilities (MTFs) and welcoming them back into the military family.

Approximately 40 percent of all Medicare-eligible military retirees and their families do not live near an MTF and will initially utilize providers who accept assignment from Medicare, with TRICARE as the second payer. The Air Force is working closely with the TRICARE Management Activity (TMA) to partner with the Health Care Financing Administration (HCFA) to expand options for these men and women, including forming Employee Health Benefit Plans.

There are approximately 377,000 Medicare-eligible beneficiaries who live near an AF MTF. A survey performed by the TRICARE Management Activity (TMA) in January, 2001 confirmed that those who currently use an MTF for at least some of their medical care are likely to continue to do so. At this time, we are unable to reliably predict what level of care they will expect to receive at an MTF, versus from a civilian provider who accepts assignment from Medicare. At a recent pilot program for Medicare-eligible beneficiaries in Florida, approximately 30 percent of those who lived near the MTF asked to enroll in the program. As faithful stewards of our taxpayers' dollars, I firmly believe that we must provide as much of their care as possible within our MTFs. I also clearly recognize that if we cannot provide service that meets their expectations, they will seek care in the community at significantly greater cost to the government. We have one opportunity to succeed; failure to accurately resource our healthcare system to provide this level of care will ultimately drive higher costs through Medicare and a less robust and ready military healthcare system. Continued underfunding of the direct care system at the expense of our managed care support contracts threatens not only our ability to provide comprehensive care for the men and women affected by this new benefit, but also for current TRICARE beneficiaries.

In those areas with large, integrated MTFs, we would like to offer beneficiaries a TRICARE Senior Prime-like option after further negotiations with HCFA. At medium-sized Air Force facilities, we are working to deploy a program similar to the demonstration program at MacDill AFB that has been so well received by beneficiaries in that area. Some of the smallest MTFs do not have the staff or resources to meet the healthcare needs of our older retirees, and we anticipate partnering closely with HCFA to ensure that these men and women receive the care they need with TRICARE as the second payer.

Question. If the retirees go to your MTFs, is your system ready and funded for the new workload?

Answer. Air Force military treatment facilities (MTFs) are eager to welcome these great American patriots back to the military family. The men and women of the Air Force Medical Service are working hard to provide high-quality, cost effective care to as many beneficiaries as possible with the resources currently available.

We will need full funding of our current requirements, as well as resources to provide additional care. No MTF currently has sufficient resources to provide all nec-

essary care for all Medicare-eligible beneficiaries who live near the MTF. Because the accrual fund will not provide any funding in fiscal year 2002, we are carefully considering options to fund care for Medicare-eligible beneficiaries, while maintaining our commitment to provide excellent healthcare to our fighting force and our current TRICARE Prime beneficiaries. The impact of the recent global settlement on the direct care system's ability to continue even its current level of effort over the next 6 months is unclear. As previously stated, we estimate that the annual costs of implementing these new benefits will range from $4.1 billion in the first year to $6 billion per year in later years. No amount of increased efficiency in our system will allow us to reallocate sufficient resources to meet this challenge.

FULL FUNDING OF THE DEFENSE HEALTH PROGRAM (DHP)

Question. Is your DHP funding stable and predictable? If not, how does that instability impact your healthcare system?

Answer. Yes, our funding levels are relatively stable and are projected out over the future years defense plan (FYDP). These projected levels, though greatly improved after OUSD(C) input, still do not adequately address the medical inflation issue, especially regarding pharmaceutical cost increases. Additionally, the direct care portion is at risk due to cost increases in the MILPERS account and private sector care. Given the extremely tight budgets, we have no ability to handle execution-year changes (such as we have seen this year with skyrocketing fuel prices and increasing pharmaceutical growth) within existing funds. So, although the funding is stable and predictable, it continues to be inadequate.

Question. Has the DHP budget accurately forecast "cost savings" and "efficiencies?" Have these savings materialized? Have you had a loss in buying power over the years?

Answer. The Air Force Medical Service (AFMS) feels we have accurately predicted cost savings and efficiencies for those programs we are able to control and to which we have had input (for example, our fiscal year 2000 initiative regarding Medical Center optimization). Projected cost savings and efficiency programs that are levied upon us are often less realistic. In my opinion, little to no savings have been realized by these levied programs (for example, the savings that was supposed to be saved by consolidating the Lead Agents—the consolidation never occurred; however, projected savings were subtracted from the budget). The Office of the Undersecretary of Defense Comptroller, OUSD(C) has assisted, with some limited success, in regaining these dollars.

The "buying power" is fairly difficult to answer quantitatively, due to medical benefit changes, population changes, and restructuring/rightsizing in the AFMS. However, looking at the Consumer Price Index for "U.S. City Average, Medical care, All Urban Consumers," we see that medical inflation since 1992 has been 137 percent. Based on our actual fiscal year 2000 funding, the AFMS has approximately 27 percent less buying power today than we did in 1992. We estimate that our actual delta between dollars received (in fiscal year 2000) and dollars required, per this index, is about 7.35 percent, or $239 million.

VENTURE CAPITAL FOR THE DIRECT CARE SYSTEM

Question. Please tell us about your plans to make your hospitals and clinics more productive.

Answer. The Air Force Medical Service (AFMS) has been a leader among the Services in its efforts to make Military Treatment Facilities (MTFs) the most efficient operations possible. One example is the Primary Care Optimization (PCO) initiative in which the AFMS is already experiencing some very encouraging results. PCO maximizes a provider's ability to care for patients by providing appropriate support staff, facilities, equipment and systems.

Re-capitalization of our infrastructure and equipment has suffered the last several years as a result of inadequate and/or suppressed funding. Our re-capitalization plan attempts to restore our Real Property Maintenance (RPM) and equipment accounts so we may continue to provide quality health care with state-of-the-art equipment in a functional and safe environment. Additional funding for RPM, military construction (MILCON), Information Management/Information technology, and medical investment/expense equipment would need to be phased in over several years. For example, the lead-time for MILCON is such that the first wave of re-capitalization funds will not be needed until fiscal year 2005.

Question. Do funding constraints keep you from optimizing your system? Would a "venture capital" fund, or a "Surgeon General's Investment and Initiative Fund" allow you to operate your system more smartly and at less expense?

Answer. Funding constraints limit our optimization efforts. When we are forced to function year to year (rather like living paycheck to paycheck), we are unable to optimally plan out-year facility maintenance and upgrade projects, medical equipment buys, adaptations to changes in medical care delivery, etc. Sometimes we do not make the most effective use of our funds, specifically, when funds come all at once at the end of the year. In such situations, funds go toward valid projects of opportunity that are not our highest priorities because our highest priorities have phasing and milestones that prevent their execution by the end of the fiscal year. Additionally, the project tends to cost more than if we had been able to properly plan for/spend those dollars.

A venture capital fund needs to be considered. Such a fund should provide near term flexibility for unexpected requirements in the budget/execution year and innovative projects where a positive return has been determined.

Question. If such a fund were established, please explain how the "best business case" approach would be used to identify, select and fund projects.

Answer. All proposed "draws" on the fund require a business case analysis. A tri-service process and forum, consistent with current processes/forums, could be easily adapted to accommodate venture capital projects. It's imperative that approval of fund withdrawals be a joint decision, i.e., no single Service or agency has the authority to approve "takes" from the fund.

ORGANIZATIONAL REFORM

Question. Would the creation of a "Joint Medical Command" or a "USMEDCOM" remedy some of the problems experienced with DOD medical programs?

Answer. Reorganization for the sake of reorganization is not a solution. It is not clear to me how an organizational change to the Military Health System will solve the current fiscal crisis or necessarily be more efficient. The current fiscal problems we have are a result of four factors: poor financial modeling, unrealistic inflation estimates, run away contract costs, and changes to the benefit.

I am concerned that a USMEDCOM is being looked at solely as the mechanism to manage cost as opposed to managing the proper balance between benefit and readiness. We need to strike the right balance of interdependency between benefit and readiness in light of each service's unique culture and doctrine, otherwise, we will dilute readiness.

While we don't believe a USMEDCOM will solve our funding problems, we do need centralized management of the Military Healthcare System with a focus on business aspects and readiness. This could be accomplished by minor realignment of responsibilities and putting more bite into components of the current structure such as the Defense Medical Oversight Committee (DMOC). Establishing a direct link from the DMOC to the Secretary of Defense (SECDEF) and Joint Chiefs of Staff (JCS), which does not exist in the current construct, would serve to facilitate the cross service coordination, optimization, and accountability we need.

Question. Is there clean authority and accountability in the DOD medical programs today? Would a "USMEDCOM" foster better lines of responsibility for DOD medical programs?

Answer. Accountability for medical costs requires dual efforts. The Defense Health Program (DHP) is currently highly scrutinized and examined in great detail at multiple levels. However, true medical costs to the Department necessitate an examination of the entire Military Healthcare System (MHS), which includes both DHP costs and those borne by the Line Components. Examples of these other costs are line funded programs and line funded manpower (both military and civilian positions). When examined together, the true costs of medical support to the government become clearer and more accurate, while additional opportunities for efficiencies can then be best considered.

While we don't believe a USMEDCOM will solve our funding problems, we do need centralized management of the Military Healthcare System with a focus on business aspects and readiness. This could be accomplished by minor realignment of responsibilities and putting more bite into components of the current structure such as the Defense Medical Oversight Committee (DMOC). Establishing a direct link from the DMOC to the SECDEF and JCS, which does not exist in the current construct, would serve to facilitate cross service coordination, optimization, and accountability we need.

RECENT TRICARE SATISFACTION SURVEY

Question. Have there been recent improvements in customer satisfaction with TRICARE? What remains to be done to further improve satisfaction with the TRICARE program?

Answer. In 1994, prior to TRICARE, 63 percent of beneficiaries reported they were satisfied with their access to care. By 1998, that had increased to 74 percent and in December 2000, to 78 percent. In those regions where TRICARE has been in place for more than three years, 83 percent of those surveyed were satisfied with the care they had received. This compares very favorably with customer satisfaction data from a recent study of beneficiaries in civilian managed care plans that reported that on average 79 percent were satisfied with their plan. Similarly, satisfaction with overall quality of care has increased from 79 percent to 90 percent. I, and all the leadership of the Air Force Medical Service, review customer satisfaction data as part of the Air Force Performance Measurement Tool. At the last TRICARE conference, I was particularly proud that Air Force facilities won three of the five awards for customer satisfaction, as well as three of the five awards for access.

However, there is always room for improvement. We are continuing to improve access through aggressive, enterprise-wide improvements in our appointing systems, including web-based appointing, improved telephone systems, after-hours clinics, and an increased emphasis on preventive, rather than reactive healthcare delivery. Beneficiaries have been included in many of the groups developing these initiatives in order to insure that changes met their needs.

MEDICAL RECRUITING AND RETENTION

Question. How is your service doing in recruiting and retaining medical professionals?

Answer. The Air Force is definitely having difficulty recruiting and retaining medical professionals. Accession rates lower compared to average rates over the last three years. Loss rates are higher compared to average rates over the last three years. Lower accession rates and higher loss rates are applicable to most Corps. The bottom-line is that losses are greater than gains over the last three fiscal years.

The Air Force has found the use of the Health Professions Scholarship Program extremely effective in recruiting high quality applicants. However, the challenge occurs trying to retain them past their year of payback for their education. We believe our difficulty in retaining providers stems from the pay disparity in some specialties with the civilian sector, the increased student debt loan, and the competitive job market for health professionals. Additionally, the work environment, job satisfaction and assignment location/stability also may play a part in retention. A Center for Naval Analysis study, currently in progress, will help to validate the reasons providers choose to leave military service.

Question. Is the current special and incentive pay structure adequate to keep your force manned?

Answer. Absolutely not. Special and incentive pays have not changed in 10 years for the health professions. The recently published Center for Naval Analyses (CNA) study, Health Professions' Retention-Accession Incentives Study Report to Congress, February 2001, offered these findings:

—A pay gap does exist between uniformed and private-sector civilians for the 24 physician specialties examined.

—A significant uniformed-civilian compensation gap exists between dentists, optometrists, and clinical psychologists at all career junctures, ranging from 13–42 percent.

—A 16-percent uniformed-civilian compensation pay gap exists for pharmacists at entry level, narrows to 9 percent at the mid-junior junction, and then reaches parity at later career points.

—Uniformed Certified Registered Nurse Anesthetists (CRNAs) experience a 10-percent compensation gap with their private-sector counterparts at the entry level.

Note: The civilian pay comparisons for the CNA study were based on conservative salary estimates from the private sector.

Question. Where do you have the most difficulty recruiting and retaining medical professionals? What specialties are most undermanned?

Answer. The Air Force Medical Service has determined the following as critical specialties, where current personnel are below 90 percent of requirements:

Physicians: anesthesiologists (76 percent), psychiatrists (83 percent), dermatologists (82 percent), pathologists (83 percent), radiologists (77 percent), and neurologists (76 percent).

Dentists: endodontists (86 percent), prosthodontists (54 percent), general dentists (68 percent), periodontists (85 percent), and oral/maxillofacial surgeons (89 percent).

Biomedical Sciences: pharmacists (80 percent), optometrists (80 percent), dietitians (89 percent), and biomedical engineers (86 percent).

Nurses: nurse anesthetists (90 percent by June 2001).

QUESTION SUBMITTED BY SENATOR RICHARD C. SHELBY

ACCESS TO MILITARY HEALTHCARE FACILITIES

Question. Retiree and dependent access to military healthcare in remote areas has become problematic. I know this is true in a number of areas, including rural areas of Alabama. I would like to ask each of the members of panel one to comment on DOD plans to meet the healthcare needs of military personnel, dependents and veterans living in rural areas with no local access to military healthcare facilities. What is the status of demonstration projects that seek to address these problems?

Answer. The TRICARE Prime Remote (TPR) program, available throughout the country since 1 October 1999, provides the "Prime" benefit to active duty service members who are not stationed near an MTF. The TRICARE Management Activity (TMA) closely monitors access and network adequacy for all Prime beneficiaries. As of 30 October 2000, family members whose active duty sponsor serves in a remote location were eligible for waiver of cost-shares, deductibles, and co-pays. Beginning 1 October 2001, these family members will be able to enroll in TRICARE Prime Remote. Also beginning 1 October 2001, Medicare-eligible retirees in remote locations will be eligible for TRICARE for Life as part of the 2001 National Defense Authorization Act (NDAA). TRICARE then becomes second payer to Medicare, with DOD paying cost-shares, deductibles, and co-pays for this population.

QUESTIONS SUBMITTED BY SENATOR KAY BAILEY HUTCHISON

TRICARE BUSINESS PRACTICES

Question. Last year I asked if the amendment that provided for increased reimbursement levels for TRICARE was adequate, particularly in areas where our military personnel could not get a provider to see them. I was told last year that we had seen an improvement by all three Surgeons General. Additionally, reports from Dr. Clinton's office also say that providers and patients are happier, but I can tell you though that is not the information that I am receiving from my constituents to include patients and providers. Many say they cannot locate a provider that will accept TRICARE for the very reasons that we talked about before, inadequate reimbursement, delay in payment and inadequate fee structures that do not compare with their civilian counterparts. Currently TRICARE reimbursement is at the 45 percent rate allowable, like MEDICARE reimbursement. It is my understanding that under the old CHAMPUS program, providers were reimbursed at 80 percent. An increasing number of MEDICARE providers are leaving networks because of this low reimbursement rate.

Gentlemen is this adequate?

Answer. TRICARE reimbursement to civilian providers, by law, is linked to Medicare fee schedule rates. Beneficiaries in TRICARE Standard pay 20 percent co-pay and TRICARE pays the remaining 80 percent of the bill up to 115 percent of the Civilian Health and Medical Program of the Uniformed Services (CHAMPUS) Maximum Allowable Charge (CMAC). After 1 April 2001, TRICARE will pay 100 percent of the bill for dependents of active duty personnel who are enrolled in TRICARE Prime for authorized services. For military retirees (and their Medicare-eligible dependents) who also have Medicare Part B, Medicare will pay 80 percent of the allowable charge, and TRICARE will pay the remaining 20 percent after 1 October 2001. Our most recent data shows that only 4 percent of providers do not accept our current payment rates and billing procedures. For calendar year 2000, overall physician CMACs increased 7.5 percent, on a dollar-weighted basis. Although TRICARE uses Medicare's payment model in most cases, we have found it necessary to create "carve outs" with higher reimbursement rates in areas in which we have had difficulty attracting enough providers to serve our beneficiaries (i.e., Alaska). Provider recruiting is also enhanced by the fact that hospitals that accept Medicare must also accept TRICARE.

Question. Will this impact the number of providers available to our over 65 year old beneficiaries?

Answer. We expect high levels of participation of those providers who currently accept Medicare because the combination of Medicare and TRICARE For Life for our Medicare-eligible beneficiaries will cover 100 percent of the allowable charges as of 1 October 2001.

Question. In areas such as Dallas, which has approximately 100,000 beneficiaries, and there is not a military medical treatment facility, how are we addressing issues of access to providers?

Answer. Health Net Federal Services (formerly Foundation) continues to develop a robust network of over 1,900 primary care and specialty providers to care for TRICARE Prime, Standard and Extra beneficiaries in the Dallas Area. Beneficiaries who enroll in TRICARE Prime are guaranteed the same access standards as beneficiaries who enroll in Prime at a military treatment facility. Recent surveys and reports have shown that access standards are being met and that 90 percent of providers have open panels and are accepting new TRICARE patients. The Dallas situation is similar to other areas of large beneficiary populations that do not have access to a military medical treatment facility. Many beneficiaries in this area are eligible for additional benefits because of the Base Realignment and Closure program.

Question. Some of my constituents are concerned about the quality of provider you get when you reimburse at 45 percent as opposed to 80 percent. Are you offering our soldiers and their families the best of the best medical care or second rate medical care through TRICARE?

Answer. TRICARE maximum physician payment amounts, by law, should be set at no more then Medicare's level of physician payments. We think that TRICARE maximum allowable payment levels (known as the CMACs) are equal to 58 percent of the provider billed charges, not 45 percent. Due to provider discounts, the actual payment levels are about 50 percent of billed charges. Those providers that accept TRICARE must meet tough requirements in our credentialing process as required by our contracts before they can see our beneficiaries. Network physicians are typically Board-certified. Clinical outcomes studies at military treatment facilities have shown results comparable or superior to those at similarly sized civilian facilities. I am aware of civilian providers' concerns about Medicare reimbursement rates, but I am unaware of any data demonstrating that TRICARE beneficiaries are receiving second-rate medical care.

Question. What do you believe are the key issues in attracting and retaining providers?

Answer. Adequate reimbursement rates, ease of submitting claims and timeliness of claims payments. We have made substantial progress in all of these areas and continue to improve. The latest data from our TRICARE Managed Care Support Contractors shows that 96 percent of all claims are being paid within 30 days, and nearly 100 percent of claims are being paid within 60 days. We are making significant progress in developing and deploying electronic claims submissions and web-based tools to further streamline claims filing and processing.

Question. Can you comment on your meetings with HCFA on identifying those who did not enroll in B and what solution is needed to waive this penalty?

Answer. My staff has carefully reviewed available data and it appears that approximately 7 percent of military retirees and family members who are Medicare-eligible do not have Medicare Part B. The TRICARE Management Activity (TMA) and the Health Care Financing Administration (HCFA) have continued to meet to explore options to best ensure that these great American patriots are served. HCFA and TMA are pooling data to facilitate this effort. In the absence of legislative relief to waive the 10 percent per year penalty, these beneficiaries will have to either pay the penalty or apply on an individual basis to their congressional representatives for a waiver to participate in TRICARE For Life. I strongly support removing this remaining impediment to restoring the promise made to our over-65 retirees and their families. I am also anxious to partner more closely in devising an equitable mechanism to care for those patients for whom DOD and HCFA have a shared risk: taxpayers should only have to pay this bill once. This will require a significant change in approach for both of our organizations, along with additional legislative assistance.

Question. What marketing plan is planned to educate the over 65 retirees about about TRICARE For Life?

Answer. In January, a letter was sent to every military retiree and/or family member who is Medicare-eligible or who would be on 1 April 2001. This letter briefly outlined some of the benefits created by the Fiscal Year 2001 National Defense Authorization Act and strongly encouraged them to enroll in Medicare Part B. In February, the TRICARE Managed Care Support Contractors mailed detailed information on the TRICARE Senior Pharmacy program to this group. Detailed information has also been shared via TRICARE Management Activity (TMA), Air Force local web sites and publications. In addition, every Military Treatment Facility (MTF) has developed local marketing strategies including signs and flyers in the MTF, articles in the base/local paper, etc. The Air Staff is refining additional marketing toolkits for distribution to AF MTFs later this spring. TMA has indicated that official DOD educational pamphlets will be available this summer. The Coalition and other retiree groups, with input from the Services and TMA, have been advertising and marketing the TRICARE For Life benefit across the United States.

Question. Can you comment on how the implementation of TRICARE For Life will impact your resources? (Physician contacts per year average 12 per year in those over 65 as compared to 4.6 per year in ages 15–44). (Days of Hospital Care per year average 269 days of care per one thousand persons in those over 65 as compared to 54.6 per one thousand persons in ages 15–44).

Answer. We consider serving the great patriots of this nation and their dependents both a privilege and a pleasure. TRICARE For Life "restores the promise" to those who have sacrificed so much. Our primary mission is to ensure the health and well being of all active duty service members, to ensure our forces are ready to meet any contingency on the global spectrum, and to ensure our medics are well trained to support the operational forces. Our plan is to maximize existing MTF capability in order to provide as much care as possible to our 65+ beneficiaries, without compromising our primary mission. Review of our TRICARE Senior Prime experience showed that our Medicare-eligible beneficiaries averaged as many as 21 outpatient encounters per year. Increasing workload at military treatment facilities (MTFs) will increase resource requirements. We face unique challenges for prudently managing our limited resources in fiscal year 2002.

We must ensure that our readiness mission, graduate medical education requirements and care to active duty families and other retirees and their families is not compromised. We will rely on private sector care to help provide the complete medical benefit, where Medicare is first payer and TRICARE second payer. In order to best serve all beneficiaries, the Military Health System must have full funding of our current requirements, as well as the new benefits authorized by the Fiscal Year 2001 National Defense Authorization Act.

Question. Gentlemen, will you be able to meet the goals of TRICARE For Life and still be able to provide care to the active force based on your projected budgetary guidelines?

Answer. Our commitment to the health and readiness of our fighting force is unchanged. They are our first priority. It is also critical that we maintain a robust patient population so that the providers who care for our service members and their families maintain their clinical skills. Successfully accomplishing these two mandates while implementing TRICARE For Life will require full funding of our current resource requirements as well as additional funding for additional workload. We must apply a balanced approach in our MTFs that ensures we are mission ready, that our graduate medical education requirements are met, and that the health needs of active duty families and other retirees and their families are not compromised. We consider it a privilege and pleasure to serve the 65+ population, but have limited capacity at our MTFs. We will not be able to provide care to all TRICARE For Life beneficiaries in our MTFs. We will rely on private sector care to help provide the complete medical benefit, where Medicare is first payer and TRICARE second payer.

MEDICAL PERSONNEL

Question. Are you able to recruit the professionals you need to meet medical personnel requirements (Active and Reserve Components)? (All three services identify recruiting and retention of nurses as an important shortfall).

Answer. The Air Force is definitely having difficulty recruiting and retaining Active Duty medical professionals. Loss rates are higher compared to average rates over the last three years. Lower accession rates and higher loss rates are applicable to most Corps. The bottom-line is that losses are greater than gains over the last three fiscal years. We have determined the following as critical specialties, where current personnel are below 90 percent of requirements:

Physicians: anesthesiologists (76 percent), psychiatrists (83 percent), dermatologists (82 percent), pathologists (83 percent), radiologists (77 percent), and neurologists (76 percent).

Dentists: endodontists (86 percent), prosthodontists (54 percent), general dentists (68 percent), periodontists (85 percent), and oral/maxillofacial surgeons (89 percent).

Biomedical Sciences: pharmacists (80 percent), optometrists (80 percent), dietitians (89 percent), and biomedical engineers (86 percent).

Nurses: nurse anesthetists (90 percent by June 2001).

The Air Force has found the use of the Health Professions Scholarship Program extremely effective in recruiting high quality applicants. However, the challenge occurs trying to retain them past their year of payback for their education.

Air National Guard

The Air National Guard (ANG) has been fairly successful to date in the area of medical recruiting. However, their new requirement to stand up critical care teams and surgical teams will be a challenge. The ANG is facing the same challenges as

the other components, such as their need to offer more incentives and increase the size of their recruiting staff to help their recruitment and retention initiatives. The status of the ANG medical recruiting program is:

Physicians.—Currently filled at 94 percent overall. However, this year we are facing increased requirements of Internal Medicine Specialists. In addition new requirement for critical care physicians and various type of surgeons have been added.

Dentists.—Currenly filled at 85 percent. There will be an increase this year for the Air Force Specialty Codes (AFSCs) that support this Corps. It is anticipated that this percentage will drop if the incentives do not remain in place to support not only recruiting but also retention.

Biomedical Sciences.—Currently filled at 79 percent. There will actually be a decrease in requirements this year and it is anticipated that the fill rate will go up.

Nurses.—Currently filled at 105 percent. Concern is with new requirements for critical care nurses, nurse anesthetists, surgical nurses, and operating room (OR) nurses.

Medical Administrators.—Currently filled at 116 percent. No recruiting concerns.

Reserves

Reserve Center (AFRC) reports that, in most cases, it can recruit the medical professionals they need given adequate funding for incentives. Their main reason for shortfalls is due to the inability to find certain specialties to fill vacancies in specific areas. Currently, their significant shortages include: general surgeon (84 percent), family physician (83 percent), public health officers (83 percent), optometrists (82 percent), orthopedic surgeon (80 percent), bioenvironmental engineer (68 percent), internal medicine (66 percent), and critical care medicine (44 percent). In the physician areas, specifically Critical Care Medicine, there are too few critical care physicians in the United States. This reduced recruiting pool, along with the requirements of their civilian practice, makes it quite difficult to draw this limited group into the Air Force Reserve. Their experience from the Desert Storm deployment and its impact on private practice make some physicians hesitant to assume a similar risk in today's environment. For optometrists, there are no real incentives for an optometrist to reduce their incomes in their private practice to make a percentage of that as an Air Force Reserve member. Also, the Air Force Reserves can't currently offer incentives to any of the non-physician shortages area.

Question. Are medical professionals able to sustain their clinical skills at a high level? (We have funded the Joint Trauma Training Center at Ben Taub which is a Tri-service program).

Answer. From the primary care standpoint, the answer is yes. Emergency Medicine physicians, Family Practice physicians, Internal Medicine physicians, Pediatricians, Nurse Practitioners, and Physician Assistants can practice full scope of care in the military medical treatment facilities.

Some of the Internal Medicine subspecialists and Surgical specialists cannot practice full scope of care at every military treatment facility. In fact, there is concern that peacetime healthcare is not adequate preparation for deployment medicine. As a result, the Air Force has developed "mission ready" currency requirements for the skills and knowledge critical to deployment medicine. New training platforms have been developed. One example is the Joint Trauma Training Center (JTTC) at Ben Taub General Hospital in Houston, Texas where approximately 65 Air Force nurses and physicians rotate annually to upgrade their experience. The JTTC is a prototype effort to provide military medical personnel with real world, hands on trauma experience.

Question. Does the current medical structure meet military readiness and force projection requirements?

Answer. Yes, the current medical structure does meet military readiness and force projection requirements. The Air Force Medical Service (AFMS) ensures that these requirements are met through the Medical Resources Letter (MRL) to source identified requirements. The MRL (which includes manpower, equipment, and supplies validated for programming, acquisition, and maintenance) ensures that the AFMS has enough personnel postured into Unit Type Codes to meet sustainment and wartime requirements. The MRL is accomplished approximately once every six months with the full involvement from each Major Command, Air Reserve, and Air National Guard components.

Question. What have been the military medical requirements for the Balkans, Southwest Asia, and other deployments? What is the impact?

Answer. We currently have approximately 200 of our Air Force Medical Service (AFMS) men and women on the ground in the Southwest Asia and European theaters providing direct support to our sustainment operations. We also have another 1,375 medical personnel in our ongoing Aerospace Expeditionary Force "on call" sys-

tem (90-day rotational standby for rapid deployment) which maintains a continuous readiness posture permitting their rapid deployment in support of a CINCs requirement. This on-call status is transparent to most, in that these providers and support staff continue to provide beneficiary health care in our medical treatment facilities (MTFs) on a day-to-day basis during their respective rotations. But to have and maintain this capability there is an impact, both positive and negative.

On the positive side, the medical care and/or support given by our providers is unequalled. From resuscitative surgery to preventive medicine, we have extremely competent and clinically current providers, as well as other professionals, who consistently step up when needed. This force health protection aspect is often critical when supporting U.S. forces in austere locations, hours from fixed/capable hospitals. Secondly, the operational exposure these providers gain in the deployed setting is immeasurable and cannot be replicated in our MTFs or civilian communities.

The downside is that to maintain a clinically current AFMS member, requires a training tail that can be expensive in both time and/or money. The time commitment necessary may also constrain the availability of that provider in the beneficiary health care system. This is important to the AFMS, as we are ardent supporters of new legislation that is bringing back the care of our retired members and their dependents. That said, a fundamental question that, as Air Force Surgeon General, I am addressing is how best to plan for and balance our operational requirements with those responsibilities and requirements supporting our beneficiary healthcare programs. A good example is the optimization of our critical care providers assigned to our rapid response teams, called Small Portable Expeditionary Aerospace Rapid Response teams (SPEARR), and their assignment to our major medical centers. This concept will offer the best forum to maintain currency of clinical skills, and deployment of these personnel will have less of an impact on beneficiary access because of the depth of manning of the facility.

THIRD PARTY COLLECTION

Question. How does the third party collection system currently work within the Military Medical Treatment Facilities?

Answer. The third party collection program (TPCP) is one of three reimbursement programs in which the Medical Treatment Facility (MTF) participates. The Medical Service Account (MSA) collects dollars directly from patients or agencies for reimbursement of medical services (i.e., inpatient stays, civilian emergencies, pay patients OCONUS, etc.). The Medical Affirmative Claims/Third Party Liability (MAC/TPL) program seeks to recoup dollars expended by the government when a third party is responsible for invoking the need for care (e.g., automobile accident, food poisoning, etc.). Funding for both programs are deposited directly back into the O&M of the facility that provides the care.

The TPCP is governed by 10 USC, Sec. 1095, chapter 55, implemented by 32 CFR Part 220, and seeks to recoup dollars for care given to eligible beneficiaries when they are covered by other health insurance. The beneficiaries under this program are never liable for amounts billed to their insurance policy or any amount not paid (balance billing). The dollars collected under the auspices of the TPCP are deposited directly back to the MTF's O&M and are used to enhance health care operation or TPCP collection operations.

Question. What is the impact on Medical Treatment Facilities of providing the medical services and collecting for those services (for example at Wilford Hall and Brook Army Medical Center in San Antonio)? Is the money returned to the Medical Treatment Facilities that provided the services?

Answer. Providing medical services for civilian trauma patients and receiving reimbursement for those services help maintain critical readiness skills for our provider and support staffs. All reimbursements for these services are collected and retained by the Medical Treatment Facility (MTF). There are no plans to implement elsewhere within the AFMS, for Wilford Hall Medical Center is the only Air Force MTF licensed to provide Level 1 trauma care.

QUESTIONS SUBMITTED BY SENATOR DANIEL K. INOUYE

BIO-CHEMICAL TERRORISM

Question. General Carlton, from your testimony the committee heard about the bio-terrorism exercise called "Alamo Alert". Based on your after-action evaluation report and the ever present real threat from terrorism, what role does the Military Health System plan for itself in response to a bio-chemical attack in the civilian community?

Answer. Senator Inouye, thank you for your time and question about our military health system's response to chemical and biological attacks within our civilian communities. The Air Force Medical Service (AFMS) is aggressively pursuing a variety of initiatives that will improve early warning and response to chemical and biological terrorism events. We are determined to provide the very best defense of the nation and partner with our civilian counterparts to leverage training, exercise opportunities, advances in the revolution in biotechnology and informatics. One of our most promising interoperability initiatives will leverage our clinical laboratories in a nation-wide network called the National Laboratory Response Network (NLRN). The Center for Disease Control and Prevention (CDC) established the NLRN, a collaborative effort between the CDC and the Association of Public Health Laboratories (APHL). The NLRN is an early warning network to detect a covert release of pathogenic agents by utilizing procedures established by the CDC. It is based on grouping laboratories into one of four different levels, A through D, according to their ability to support the diagnostic needs presented by a bioterrorism event. Laboratories able to conduct basic tests to rule out a particular biological agent can operate at Level A. Recognizing that most DOD clinical laboratories currently have the capability to operate at Level A, and that this added capacity would enhance the NLRN, the CDC is looking at DOD laboratories to enhance its NLRN. Additionally, the CDC and USAF Surgeon General have entered into a Memorandum of Agreement to support the establishment and coordinate collaboration towards the development of a National Medical Early Warning System of which the NLRN is an important component.

Another initiative is the United States Air Force weapons of mass destruction (WMD) first responder enhancement program predicated on interoperability with local and state authorities and agencies. The program's purpose is to enhance First Responder (firefighters, disaster preparedness, explosive ordnance disposal, security forces, and medical staffs) planning, training and equipment capabilities to improve an installation's ability to detect, assess, contain and recover from a peacetime WMD terrorist (non state actors) incident involving biological, nuclear/radiological, incendiary, chemical, explosive devices. Where appropriate, response planning criteria includes the activation and use of local memoranda of agreement with local authorities. The Air Force program provides for an initial response capability using fire protection, hazardous materials, disaster preparedness, security, medical, and, where available, explosive ordnance disposal personnel for improvised explosive devices, as the core response elements. The initial responding elements assess and determine the extent of the problem (within capability), take actions to implement contamination avoidance measures, contain the spread of contaminants, and provide initial casualty care capability. All Air Force installations are required to have mutual aid support agreements for security, fire protection, hazardous material, medical, and explosive ordnance disposal. Memoranda of Agreement (MOAs) ensure an effective coordinated response between the Air Force and civilian communities. Bases address exercises, training and interoperability of equipment during coordination of MOAs between installations and localities through the Local Emergency Preparedness Committee (LEPC) or Area Contingency Plan (ACP) representation. These written agreements and exercises extend to terrorist WMD incidents.

In another force multiplying effort, the United States Air Force (USAF) surgeon general's office provided planning information and capability description for its deployable and in-place medical assets as an annex to the Chairman of the Joint Chief's of Staff Instruction (CJCSI) 3110.16, "Military Capabilities, Assets, and Units for Consequence Management Operations." This annex is maintained by the Defense Threat Reduction Agency (DTRA) as an information resource for joint planners. The Air Force Medical Service (AFMS) is actively involved with the Joint Task Force—Civil Support (JTF–CS), ensuring that Air AFMS assets are written into its deliberate plans for a homeland or nuclear/radiological, biological or chemical terrorism event. Additionally, the USAF/SG is creating new deployable assets to better provide bioterrorism consequence management situational awareness to the JTF–CS commander and his supported state and local first responders.

As I noted at your hearing on February 28, 2001, the USAF, Texas National Guard, and City of San Antonio conducted exercise ALAMO ALERT in January 2001. Alamo Alert, and its component gaming simulation, CODE SILVER-San Antonio, were designed to provide the impetus for continued development of joint, integrated military /civil response plans. This exercise clearly illustrated the need for expanded cooperation among the civilian and military communities, with particular emphasis on health care providers and public health functions. The CODE SILVER-San Antonio game discussions revealed several areas of continued concern. These included: the complex nature of public affairs in a contagious bioterrorism event; the challenges of interagency communications in the initial stages of a response; the im-

portance of early recognition of terrorist-induced disease outbreaks; the central role of infection control procedures in containing an outbreak; and the need for a strategic approach to infection control. Other topics were the need for comprehensive planning to provide a health care "surge capacity" to metropolitan areas and the requirement for mass vaccination planning in concert with the Centers for Disease Control.

In addition to these specific issues, the broad lessons of Alamo Alert related to strategy, resources, and planning. In two critical areas of the response, infection control and public affairs stood out as critical items, reinforcing the need for the development of strategic approaches based upon sound thinking and with a "big picture" view of the unfolding situation. Finally, the exercise participants learned the importance of crisis decision making in a bioterrorism situation. The "will to win," to make difficult decisions, will be necessary if a community hopes to successfully overcome bioterrorism. The need for crisis decision making and leadership to be realistically and honestly exercised was apparent throughout Alamo Alert. The AFMS has a similar training and exercise program ongoing in the Pacific Theater—AFMedPac2000. This effort stresses chemical and biological planning and awareness at our medical treatment facilities, encouraging commanders, staff and readiness personnel to critically evaluate their plans, resources and interoperability with local, state and national assets. The summer 2000 exercise at Elmendorf AFB in Anchorage, Alaska featured an integrated state and local response. Hickam AFB in Honolulu, Hawaii will exercise in July 2001.

Disease early warning and surveillance are life savers in a bioterrorism event. The results of the May 2000 TOPOFF exercise in Denver highlight how local communities—indeed even state and national assets—can be quickly overwhelmed in catastrophic and contagious biological agent attack. The AFMS is the lead for a Department of Defense dual-use science and technology program called the Lightweight Epidemiology Advanced Detection and Emergency Response System (LEADERS). This system is designed to provide military commanders, civilian authorities and medical personnel with the enhanced ability to mitigate the consequences associated with response to a biological warfare event or the onset of a significant natural disease. Rapid identification of the medical threat and effective and ongoing communications between medical facilities and Command personnel is an essential element in minimizing loss of life and the potential for disaster. The LEADERS System provides an integrated collection of medical surveillance capabilities, including real-time, easy-to-use mechanisms for collecting, storing, analyzing, and viewing critical medical data, along with an Incident and Event Management capability to facilitate a rapid, effective response. LEADERS is currently in stage 1 proof of concept development. Prototypes were involved with local hospitals during the Democratic and Republic National Conventions last summer, the Presidential Inauguration in January 2001, and the AFMS is working through the Defense Threat Reduction Agency for possible LEADERS deployment to the Winter Olympic Games at Salt Lake City, Utah in 2002.

The biotechnological revolution may be the most profound revolution in modern times—and the AFMS is leveraging this fast-paced technological juggernaut to improve our nation's defense. One example of a new research initiative launched by USAF Surgeon General is the Ecogenomics in Outbreak and Surveillance (EOS) project. Its primary objective is to develop a rapid detection microarray capable of detecting respiratory pathogens in a controlled population of USAF basic military trainees (BMT) and technicians. This model system will demonstrate the effectiveness of microarray technologies in pathogen classification. EOS will start with detection of viral respiratory pathogen-specific sequences, but this system proposed can be expanded to bacterial, fungal, and chimerics. Development efforts for EOS have emphasized future capabilities that allow not only direct hybridization capabilities, but also biochemical reaction assessments and proteomics capabilities simultaneously. This will be accomplished with HydroGel chip technology from Packard Biosciences and Qdots particles from Quantum Dot Corporation (QDC). Stanford Research Institute (SRI) will provide a handheld microarray reader unit that will detect Qdots and the technical expertise to miniaturize the sample processor and microarray reader unit towards a field-capable system. An additional goal of the EOS project is to serve as a model for producing additional disease-specific microarrays that can be utilized when rapid identification of an organism in an outbreak investigation is required. Success with this methodology will be the first step in changing the steps of the current outbreak investigation paradigm.

Numerous potential applications for genomics in the chemical and biological warfare (CBW) are possible. EOS will focus on infectious disease pathogen identification in a real-world controlled population as a step towards rapid detection of CBW agents of interest to the Department of Defense (DOD). However, any CBW projects

utilizing the methods developed as part of the EOS project will be coordinated with the U.S. Army as the lead agent. The high incidence density of respiratory illness in this controlled military population presents a starting model for future assessments of the impact of biological, chemical, physical and social exposures at the molecular level (i.e., ecogenomics) and will provide improved technology for the detection and identification of biological threat agents.

MAINTAINING WAR READINESS SKILLS

Question. General Carlton, in your testimony this morning regarding the Primary Care Optimization initiative, you stated that 80 percent of the Air Force Medical Service (AFMS) care is delivered in primary care clinics. You also reported on some very exciting and ambitious State-of-the-Art Expeditionary Technology as well as Air Force Readiness Plans. Given the current retention status of the Air Force Medical Service how will you implement these initiatives across the Air Force Medical System and at the same time have a trained medical staff able to perform the traditional medical intensive interventions required in a large scale battle scenario?

Answer. Although our manpower losses have been greater than our gains over the past three years, I am confident that we can maintain a trained medical staff capable of performing our medical readiness mission as well as implement "state-of-the-art" initiatives.

We currently have 200 Air Force Medical Service (AFMS) personnel on the ground in Southwest Asia and European theaters providing direct support to our sustainment operations. We also have 1,375 medical personnel assigned to deployable medical units that support the Aerospace Expeditionary Force (AEF). We have several specialized teams (rapid response, critical care, surgical, public health) that can be deployed in building block fashion to support the CINC's requirements. Our deployment teams pull 90-day rotational standby for rapid deployment in support of AEF. We are working hard to insert man-portable technology into these deployable teams to bring medical center-level care to the front line. These technologies include ultrasound, radiology, and other high tech monitoring capabilities through lap top computers.

We have centralized our assignment of deployable surgical and critical care medical team personnel to our medical centers and large hospitals. The advantages are two-fold. First, the medical center environment provides a rich clinical environment to sustain critical readiness skills. We can also have enough depth in services and staffing so that the deployment of our readiness teams will have less of an impact on our peacetime beneficiaries' access to care. Our smaller facilities and clinics have a readiness mission of force readiness and protection—to proactively ensure that all Air Force personnel are medically fit and ready to support the Air Force mission as well as support the deployable preventive medicine teams.

In addition to moving our deployable medical readiness assets to medical centers, we have also implemented the Readiness Skills Verification Program. This program identifies those critical skills needed for every team member and outlines training programs to meet those needs. To ensure our critical care personnel have current trauma skills, we send them for extensive training in civilian medical centers with trauma units. We are currently at Ben Taub in Houston, TX, and will begin at Baltimore Shock Trauma in Baltimore, MD this fall.

QUESTIONS SUBMITTED BY SENATOR ERNEST F. HOLLINGS

BLOOD-RELATED DISEASE RESEARCH

Question. Under Congressionally Directed Medical Programs, is there on-going research targeted on blood-related diseases such as leukemia or lymphoma? Is blood-related disease research to be consistent with the mission of DOD medical research?

Answer. There is no on-going research within the Congressionally Directed Medical Research Programs that is targeted on blood related diseases, to include leukemia or lymphoma.

Is blood-related disease research to be consistent with the mission of DOD medical research? The answer to this question depends in part on how broadly the phrase "blood-related disease" is to be interpreted. Blood diseases, as they are generally defined, are not a consequence of most military activities or threats, and so are not considered within the mission of DOD medical research. This fact notwithstanding, there may be military applications of knowledge gained through blood disease research. The military applications of such knowledge are, for the most part, peripheral to the diseases themselves and do not benefit victims of these diseases. Certain research projects on blood-related diseases may be consistent with the DOD medical

research mission if the anticipated findings can be clearly demonstrated to have direct relevance and applicability to a militarily unique need. All such projects need to be considered on a case-by-case basis.

The principal area of potential application is in combat casualty care. Hemorrhage resulting from trauma is the primary cause of battlefield deaths, and the DOD medical research mission is accordingly concerned with the development of hemorrhage countermeasures, to include the application of clotting enhancers that were originally identified through studies of clotting disorders. Clotting disorders are also occasionally associated with trauma-induced hemorrhagic shock, reperfusion, and hypothermia; such disorders represent secondary complications of trauma that are much less important than hemorrhage as a cause of battle-related morbidity and mortality, but are nonetheless consistent with the mission of DOD medical research. In addition, studies on platelet function may be consistent with the DOD mission if they can be related to the development of improved (field-expedient) means for platelet preservation and storage. More broadly, the DOD is interested in substances that can improve oxygen flow to organs under hemorrhagic conditions where blood flow is reduced. To the extent that studies of anemic conditions or therapies for these conditions can be related to the development of pharmacological or other countermeasures that could be employed in a field trauma management setting, they may be consistent with the DOD medical research mission.

If one considers blood-related disease more broadly, there are a number of infectious disease pathogens of military importance that are blood-borne and cause symptoms directly through their effect on blood cells or blood vessels. Examples include malaria, Human Immunodeficiency Virus (HIV), and a number of viruses that can cause hemorrhagic fevers. However, such diseases are not typically considered to be blood diseases, per se. Within the DOD medical research mission, they are instead addressed through strategies targeted at the infecting organisms. Because the primary focus of this component of DOD mission research is on prevention of disease, symptomatic treatments targeted at a particular organ system such as blood are not of military relevance. Research on the pathogenic effects of these organisms on blood components are only studied insofar as is necessary to understand the life cycle of the organism, identify appropriate targets for intervention (i.e., through vaccines or drugs), and identify and understand correlates of protection that are essential to the evaluation of product efficacy.

Question. Has any work been done to identify the occurrence rate or prevalence of blood-related diseases resulting from environmental exposure in the theater of war?

Answer. There have been extensive studies among deployed forces including Gulf War (currently a $155 million portfolio, over 190 research studies), Southwest Asia (SWA), and Bosnia veterans. The Army Medical Surveillance Activity (AMSA) is the principal DOD surveillance group with the DOD Deployment Health Research Center located at the Navy Health Research Center (NHRC) as the principal custodian of in-depth exposure research. The NHRC is completing a study looking at Gulf War, SWA, and Bosnia veterans and health outcomes. Additionally, NHRC has begun the Millennium Cohort Study, the largest Department of Defense prospective cohort study ever conducted, which will attempt to answer the question "Does military service, in particular, operational deployment, result in a higher risk of chronic illness among military personnel and veterans?" The probability-based sample of 140,000 military personnel will be surveyed every 3 years over a 21-year period. The first questionnaire, scheduled to be released in summer 2001, will be sent to 30,000 veterans who have been deployed to Southwest Asia, Bosnia, or Kosovo since August 1997, and 70,000 veterans who have not been deployed to these conflict areas. Twenty thousand new participants will be added to the group in each of the years 2004 and 2007 to complete the study population of 140,000.

The final White House document on DOD research efforts regarding exposures during the Gulf War can be found at http://www.mvhcb.gov/GWsummary/GWI%20Summary%20Page.htm.

HEALTH OF AMERICAN TROOPS

Question. The National Academy of Sciences and the Institute of Medicine issued a report in January, which made recommendations to the Department of Defense about improving the health of soldiers deployed to the theater of war. The Institute's recommendations are compelling and, if implemented, would make a strong commitment to the health of American troops. Are you familiar with the Committee's recommendations? Do any of the individual services, or the Department of Defense, have implementation plans for the any of the Committee's recommendations? If not, why not?

Answer. The National Academy of Science's Institute of Medicine (IOM) final report Protecting Those Who Serve: Strategies to Protect the Health of Deployed U.S. Forces is an important work regarding DOD strategies for Force Health Protection (FHP). It has been reviewed by the Air Force (AF) leadership and distributed to our medical facilities. This document will serve as a baseline to identify opportunities for improved FHP approaches across the Air Force. Many parts of the six outlined strategies have already been implemented or are being developed in the Air Force and other Services, but challenges particularly remain in the areas of documenting and tracking exposures in relation to individual personnel as well as fully computerizing patient records.

FHP arose from earlier initiatives to change and improve the Military Health System's response to deployments and the health of deployed forces. A January 1996 policy memorandum had directed a detailed medical surveillance and health protection plan for U.S. military forces deploying to Bosnia. In August 1997, DOD issued a directive DODD 6490.2, "Joint Medical Surveillance," and an accompanying instruction, DODI 6490.3, "Implementation and Application of Joint Medical Surveillance for Deployments," which addressed many shortfalls in the Military Health System's response to health and health protection during deployments. In mid 1998, the Air Force Medical Operations Agency directed United States Air Force Major Command Surgeons to implement DODD 6490.2 and DODI 6490.3 in interim guidance. Later in December 1998, the Joint Staff, in collaboration with the Assistant Secretary of Defense for Health Affairs, specified the preventive actions that must take place before, during, and after deployments to assure better health protection and properly documented health care. Joint Staff Memorandum MCM–251–98 (4 December 1998) requirements superseded the interim guidance. Our Air Force Preventive Medicine (PM) and Bioenvironmental Engineering (BEE) staff are currently working with J4–MRD, the Services PM representatives and the Joint Preventive Medicine Policy Group on revisions of the Joint Staff Memorandum, now in second draft. We are also preparing an Air Force Instruction jointly with the other Services to institutionalize comprehensive health surveillance in deployments (expected completion date (ECD) 31 December 2001).

The following documentation groups several specific initiatives completed or in progress according to the six strategies proposed by the IOM:

Strategy 1. Use a systematic process to prospectively evaluate non-battle risk associated with the activities and settings of deployments.

The Armed Forces Medical Intelligence Center (AFMIC) collects detailed information on a continuing basis on worldwide disease and environmental hazard data and links this data to appropriate preventive medicine countermeasures. Recently, AFMIC has been expanding its mission and capability to include more detailed information on environmental hazards. A major product of the AFMIC is the Medical Environmental Disease Intelligence and Countermeasures CD–ROM, an aid widely distributed throughout the Services to assist operational planners and others in preventive medicine planning for deployments.

The recent deployment of U.S. troops to Bosnia and Kosovo exemplifies how DOD is integrating comprehensive environmental risk assessment data with troop deployments. Realizing that deployments of troops in close proximity to industrialized areas presents increased Force Health Protection concerns, the DOD in preparing for this deployment used medical intelligence data in selection of deployment sites and surveillance efforts.

Strategy 2. Collect and manage environmental data and person location, biological samples, and activity data to facilitate analysis of deployment exposures and to support clinical care and public health activities.

During a period of 12 months, over 800 environmental samples from Bosnia and Kosovo were analyzed for over 6,600 separate factors. This analysis was done in theater, allowing for quick turnaround, with results usually available to operational commanders within 10 days. Similar environmental sampling is being conducted in Southwest Asia. Ongoing environmental surveillance in accordance with existing policy outlined in DODI 6490.3, "Joint Medical Surveillance for Deployments," has ensured environmental risks are minimized and environmental exposure data are collected, analyzed, and assessed for potential health impact.

The Defense Medical Surveillance System (DMSS), a Joint capability managed by the Army Medical Surveillance Activity (AMSA), U.S. Army Center for Health Promotion and Preventive Medicine (USACHPPM) (see detailed description under Strategy 4), provides the link between health surveillance data and specimens in the DOD Serum Repository, which contains more than 26 million frozen serum specimens from military personnel. As part of routine screening for Human Immunodeficiency Virus (HIV) infection, these specimens are routinely collected during military service and before major deployments and are available for analysis when

new health questions arise. In addition, Joint Task Force Surgeons can request additional serological sampling when required by concerns that arise during or after a specific deployment. Serological surveys using specimens from the repository have successfully provided evidence-based answers regarding the prevalence of such infections as Hepatitis C and Lyme disease in our troops. Access to the serum bank is limited and is coordinated through AMSA.

Strategy 3. Develop the risk assessment, risk management, and risk communication skills of military leaders at all levels.

A major goal of FHP is to make military members partners in protecting their health by supplying them with the knowledge, skills and resources needed to stay healthy during military service. Risk communication on health risks and preventive countermeasures is a required element before, during and after deployments.

One example of this component of FHP is the Health Risk Communication Office at the U.S. Army Center for Health Promotion and Preventive Medicine. Their mission is to develop risk communication skills throughout the U.S. Army and DOD by (1) providing risk communication expertise and training, (2) delivering consultation to senior leadership, (3) developing health risk communication publications, and (4) responding to emergency situations. The Health Risk Communication Office sponsors training workshops on effective, evidence-based tools and techniques for risk communication in high-concern, sensitive, or controversial situations.

Another communication initiative is the DOD Deployment Health Clinical Center at the Walter Reed Army Medical Center. A primary mission of the clinical center is to develop and implement clinical risk communication strategies. Veterans and clinicians need and want sound and timely information regarding deployment-related exposures and deployment-specific health outcomes. The center is developing a dynamic web site to sustain a dialogue with those it is charged with protecting and their clinicians regarding exposures, diseases, health concerns, and medically unexplained symptoms.

An interagency initiative supporting improved communication is the Health Risk Communication Working Group of the Military and Veterans Health Coordinating Board. This working group provides recommendations and coordination for the health risk communication efforts of the DOD, VA, and the Department of Health and Human Services (DHHS) for military members, veterans, deployed civilians, and their families. The working group's primary focus is on health risk communication before, during, and after combat operations and other major deployments.

The Office of the Special Assistant for Gulf War Illnesses (OSAGWI), since renamed the Office of the Special Assistant for Gulf War Illnesses, Medical Readiness, and Military Deployments (SAGWIMRMD), developed and implemented a comprehensive risk communication program to respond to the concerns of Gulf War veterans, service members, and their families. The program had its inception with a toll-free hotline (1–800–497–6261) set up by the Persian Gulf Illnesses Investigation Team in 1995. SAGWIMRMD has communicated directly with more than 16,000 veterans since 1996. GulfLINK (www.gulflink.osd.mil), the Special Assistant's award winning internet home page has been the single place that all DOD documents relating to Gulf War illnesses can be found. Typically, GulfLINK gets over 60,000 home page "hits" in any given week.

Strategy 4. Accelerate implementation of a health surveillance system spanning the service member life-cycle and beyond.

One of the more innovative aspects of improved surveillance has been establishment of the Defense Medical Surveillance System. In March 1997, the Assistant Secretary of Defense for Health Affairs directed the Army to establish a Defense Medical Surveillance System by transitioning from an Army-specific system. The Army Medical Surveillance Activity U.S. Army Center for Health Promotion and Preventive Medicine developed and now operates the new surveillance system. The DMSS contains up-to-date and historical data on diseases and medical events (e.g., hospitalizations, ambulatory visits, reportable diseases, HIV tests, immunization tracking data and health risk appraisals) and longitudinal data on personnel and deployments. The Defense Medical Epidemiology Database application provides authorized users worldwide with real-time access through the Internet to user-defined queries of aggregate data in the surveillance system.

The Recruit Assessment Program (RAP) is a pilot DOD program for the routine collection of demographic, medical, psychological, occupational, and risk factor data from military recruits at the time of accession. If successful, the RAP will initiate a longitudinal health record for military personnel at accession and provide comprehensive, baseline health data on military recruits. The RAP is currently in pilot testing at several recruit centers, with plans for more extended implementation. Pilot testing has been funded by Gulf War related research funds through the Naval Medical Research Center.

The Military Health System (MHS) uses the Health Enrollment Assessment Review (HEAR) as a self-reporting tool for TRICARE PRIME beneficiaries, including active duty, but compliance problems have been encountered in collecting the information. In response, the Air Force has moved to implement a "stand-alone" HEAR to improve data collection and availability. The HEAR is designed to be collected annually on Air Force active duty as a part of the Preventive Health Assessment (PHA). The TriCare Management Activity (TMA) has the lead for implementing HEAR in the DOD and/or developing and fielding a better health status self-reporting instrument(s). Currently, TMA has contracted with researchers at Yale University to evaluate the utility and validity of the HEAR and other self-reporting tools for use in establishing health status and risk factors periodically for military members.

In 1999, OASD(HA) established DOD Deployment Health Surveillance, Research, and Clinical Centers. One of the major initiatives of these Centers is the Millennium Cohort Study. The Millennium Cohort Study is a prospective study of U.S. military forces scheduled to begin this year. This study will systematically collect population-based demographic and health data on over 100,000 Armed Forces personnel to evaluate health throughout their military careers and after leaving military service. The principal objective of the study is to evaluate the impact of military deployments on various measures of health over time including medically unexplained illnesses and chronic diseases such as cancer, heart disease and diabetes.

Strategy 5. Implement strategies to address medically unexplained symptoms in population that have been deployed.

As noted earlier, the Millennium Cohort study is one effort that may help elucidate the nature of medically unexplained symptoms in deployed populations. Another major initiative of the Deployment Heath Centers may also help in this regard. The Deployment Health Clinical Center, in cooperation with the Department of Defense/Veterans Affairs (DOD/VA) Clinical Practice Guidelines working group, has developed the Post-Deployment Health Clinical Practice Guidelines. These guidelines will help improve the management of post deployment illnesses in general, but also contain a module that specifically addresses medically unexplained physical symptoms. The Deployment Health Clinical Center plans on-line, web-based support of these guidelines, in addition to various other implementation aids. The Deployment Health Clinical Center is actively engaged in research activities to identify diagnostic and treatment strategies that will improve our approach to these challenging conditions.

Strategy 6. Implement a joint computerized patient record and other automated record keeping that meets the information needs of those involved with individual care and military public health.

The Composite Health Care System II (CHCS–II), the Military Health System's medical and dental clinical information system, is the major information technology enabler for FHP. This system will provide the computer-based patient record for every military member. Release 1, currently in on-site testing, includes capabilities for clinical and dental outpatient care, population health, preventive health care, ambulatory computer-based patient record, and regional clinical data repositories, and interfaces with existing health information systems and the Defense Enrollment Eligibility Reporting System. Release 2 will support general dentistry, worldwide availability of records, optometric services, automated clinical practice guidelines, and occupational health/industrial hygiene.

The clinical functionality represented by CHCS II will be deployed to theater operational forces in fiscal year 2002 as "CHCS II Theater" through the Theater Medical Information Program (TMIP). The Theater Medical Information Program, which is being developed to function in the operational environment, will gather individual medical information throughout a deployment. Because this program is integrated with CHCS II, military medical personnel will be able to move readily from health care in a clinic or hospital to the field and medical information from deployments will be more accessible for future clinical and health surveillance uses. TMIP is a component of the Department's Global Combat Support System and is fully integrated with war-fighter theater infrastructure programs. TMIP will support the collection and monitoring of immunizations, ambulatory care, diagnosis, treatment, radiation/occupational health, blood management, medical surveillance, and medical command and control at the deployed medical facility level. Furthermore, TMIP will electronically transmit and aggregate these data to the interim theater database at the Joint Task Force Commander level for use in detecting disease and illness clustering where overt exposure histories do not exist. At the conclusion of the deployment the patient medical encounter information will be electronically transferred to the Continental United States (CONUS) based clinical data repository for incorpora-

tion into the individual's computerized patient record. TMIP is currently fully funded through the fiscal year 2007.

Recognizing that the promised capabilities of TMIP may not be fully realized until as late as fiscal year 2007, the Air Force Medical Service (AFMS) has acted to improve Force Health Protection through computerized medical records more immediately. In fact, there is a currently deployed electronic medical surveillance system in Southwest Asia today. This system, the Global Expeditionary Medical System (GEMS) incorporates use of an electronic medical record to accurately track untoward events in our deployed force and improve documentation of care.

GEMS is a paperless data-linked tool for the front line medic to record individual patient assessments. From the lessons learned from prior systems called Desert Care 1 and Desert Care 2, this system can work from a hand-held palm unit in mass casualty or combat environments. Medical information is aggregated at progressively higher levels allowing for accurate theater assessment, epidemiological monitoring and decision-making. GEMS is designed do this now. Experience from use of this system may help instruct later development of TMIP.

GEMS includes two other modules, the Theater Epidemiology Module (TEM), and the Theater Occupational Module (TOM). The TEM offers automated surveillance and reporting of deployed force health and readiness. TEM takes patient encounter data entered from the GEMS and provides graphic display and analysis of patient data. Geographic areas of responsibility are mapped and surveillance queries defined by the user are automatically run on all medical data from each location in the database. The Theater Occupational Module (TOM) is a far forward extension of the USAF Command Core System (CCS) functionality within GEMS. The TOM is able to record, track and monitor occupational and environmental concerns in the expeditionary setting while maintaining a bi-directional interface with the home base CCS.

The Air Force is the first Service to have implemented force-wide automated tracking of all its active duty immunizations, not just those for anthrax. Through the Military Immunizations Tracking System, and its follow-on, the Air Force Complete Immunizations Tracking Application, clinical personnel, administrators, and others have instant access to the vaccination status of their people. This facilitates reminder-recall, readiness, and vaccine safety.

The previously mentioned DMSS has important relational database capabilities that combine data from many current sources of clinical, personnel and surveillance data, enabling them to be analyzed by other factors, including deployment status. For example, the DMSS is able to link data from Service immunization tracking programs to health outcomes data from inpatient and outpatient databases. This capability is similar to that of the Vaccine Safety Data Link at the Centers for Disease Control, and is a powerful tool for monitoring safety of immunizations such as the anthrax vaccine.

The Government-Computerized Patient Record (G–CPR) initiative, a collaborative effort among the DOD, Department of Veterans Affairs and Indian Health Service is developing the mechanism to allow the transfer of data between DOD and VA. Actual transfer between DOD and VA was accomplished in fiscal year 2000 within a laboratory environment. Plans are under development to test this capability in an operational prototype environment.

Conclusion: We appreciate this opportunity to elaborate on the questions posed. We are continuing to work routinely with the other Services, Health Affairs and the Veterans Administration on deployment, post-deployment and longitudinal health issues for our military men and women. While we have made significant strides in improving our Force Health Protection strategies since the Gulf War, much is yet to be done. We are committed to fulfilling our full obligation and responsibility in this regard.

QUESTIONS SUBMITTED TO GEN. WILLIAM T. BESTER

QUESTIONS SUBMITTED BY SENATOR DANIEL K. INOUYE

ADVANCED PRACTICE NURSES IN THE MILITARY

Question. There have been several initiatives mentioned today regarding improvements to the Military Health System enabling better care for our patient population, what specific role do Advanced Practice Nurses have in this effort to improve access to care and provide quality care? What is the optimum career path for proper utilization of nurse practitioners in the military?

Answer. Advanced Practice Nurses are an integral component of the total health care delivery system. Nurse practitioners are primary care managers for an entire panel of patients and are responsible for every aspect of health care need by providing direct care, education and management of acute and chronic conditions. Nurse midwives are fulfilling the growing demand for alternative prenatal and delivery care. As such, both nurse practitioners and nurse midwives definitely increase access opportunities for our beneficiaries. The certified nurse anesthetists' ability to provide independent comprehensive anesthetic care in far forward situations in addition to the hospital setting also contributes to improving access opportunities for care.

The optimum career path of nurse practitioners in the military would be similar to that of any other Army nurse corps officer. Their post graduate utilization would focus on providing direct patient care in the clinical setting. Subsequent assignments would include an increase of administrative scope and responsibility to include management of a clinic(s), section or department. Nurse practitioners are afforded opportunities for military and professional development and enjoy very successful careers to retirement.

CIVILIAN HEALTH PERSONNEL RECRUITMENT

Question. In your testimony's today you have noted problems maintaining enough physicians in the military, are there specific issues or obstacles you face in reference to hiring civilian physicians? Are there similar problems hiring enough support staff for physicians?

Answer. The answer is yes to both parts of the question. Let me start with some statistics on our civilian Medical Officers to show the extent of our problem. At least since 1999, we have been unable to staff to requirements—reaching 43 percent of requirements in 1999; 57 percent, in 2000; and currently, we have on board only 45 percent of our civilian Medical Officer requirements—in numbers, that is 352 Medical Officers of the 776 required to perform mission. Although we experience a voluntary separation rate among our Medical Officers of only 8 percent a year, 21 percent of our current population (75 Medical Officers) is eligible to retire this fiscal year. During fiscal year 2000, we filled 52 Medical Officer vacancies; it took us an average of 160 days for each action. When we look at outside hires, bringing new doctors into the Federal system, the time jumped to an average of 180 days each.

To further define the problem in terms of "support staff" for physicians, I will discuss only a few of our civilian medical occupations to make the point. We are staffed at 85 percent of requirements for Physician Assistants, 75 percent for Registered and Licensed Practical Nurses, 40 percent for Occupational and Physical Therapists, 70 percent for Medical Technicians, 35 percent of Therapeutic Radiological Technicians, 85 percent for Pharmacists, 50 percent for Optometrists; and 30 percent for Dentists. Only 7 percent of our RNs are eligible for optional retirement this year; but we experience a voluntary turnover rate (i.e. resignations and retirements) among our civilian RN corps of approximately 15 percent a year. Twelve percent of our Pharmacists are eligible to retire this year; but our pharmacists leave us at a rate of around 12 percent a year. So, as you can see, we face a growing recruitment and retention challenge.

Historically, we've met many of our unfulfilled civilian requirements with military personnel, but Army Transformation, MEDCOM Optimization, and other strategic efforts are making this more and more difficult. We make extensive use of a supplemental contractor force, which serves some needs well—but overall, the contractor force is more expensive and does not build a continuity of mission capability for us.

Here's what we're doing to help ourselves. We have dedicated an Army civilian personnel cell to external recruitment for many of our hard-to-fill medical occupations. We have increased our efforts to bring separating active duty medical personnel into the civilian corps. For example, we make full use of Veteran's Readjustment Appointments and waivers of the 180-day waiting period after separation from active duty before entry into the Federal civil service. We seek and apply special pay rates and physician's comparability pay and special bonuses for recruitment, relocation, and retention. We are working within Department of Army and with Department of Defense to get permission to use the Defense Priority Placement Program as a recruitment source for our hard-to-fill medical occupations rather than a reactive mandatory placement program. We are currently analyzing the Secretary's of Defense Title 38 United States Code civilian personnel program authorities that the Office of Personnel Management has delegated to improve our ability to attract and retain a high performing civilian Army medical corps.

OPTIMIZATION OF CARE

Question. Over the last year or so, there has been much discussion about optimization of care as critical to providing an efficient and effective medical benefit. What results have you achieved to date?

Answer. By optimizing the military health system, we can—

Increase physician satisfaction, retention, and readiness by reducing the frustration our providers feel due to the shortages of staff support and examination space provided at many of our aging military treatment facilities. The optimization effort is directed in part towards addressing these shortfalls and identifying the resources needed to fix this unanticipated effect of personnel drawdowns and funding cutbacks. The system works as well as it does today only because of the dedication and selfless service of our military members, civilian employees, and our many hospital volunteers.

Avoid cost shifting to MCSC by reducing the costs associated with increased reliance on the private sector care. Increasing the direct care system capabilities will minimize the risk exposure for both the DHP and our managed care support contract partners. Because of our current contractual commitments, cost shifting to our managed care support contractors is a losing proposition for both parties since we jointly share the financial risk of providing health care.

Deliver on our commitment to care for DOD beneficiaries by increasing enrollment opportunities, improving access to our direct care system, enhancing the spectrum of direct care services at our MTFs, and improving patient satisfaction.

What have we accomplished so far?

We are incorporating state of the art advances in medical practice into our facilities. Business case analyses are used to prioritize funding for such advances as computerized liquid cytology systems to reduce necessary visits for effective screening of cervical cancers and for the deployment of the latest high resolution positron emission technology scanners for localizing disease and planning precision surgical operations.

We have completed a primary care model that allows a detailed look at the staffing, facilities, and workload at our treatment facilities. This model can be used to explore changes in staffing patterns as well as to track productivity. Enhancements will tie changes in staff and providers to changes in purchased care requirements and costs. This will, in turn, facilitate business decisions about capital investments and personnel assignments.

Optimization goals are built in to our strategic plan and our balanced scorecard so all members of the Army Medical Department know where our priorities lie. The optimization process directly supports our overall goals and those of the MHS.

Question. General Bester and Admiral Martin have the Army or the Navy had problems maintaining the credentialing of their staff's go to war skills?

Answer. Go to war skills are required by the entire Army Medical Department on a continuous basis. It is our mission to be ready to support the country at a moment's notice if there is a need to exercise the military element of national power. Our staff needs to be ready to care for troops in the field and to be ready and fit itself. At the same time, we must meet the highest expectations for quality, safe, efficient and effective peacetime medical care at home and abroad. Meeting both requirements requires balance.

The American people expect their sons and daughters in military service to be cared for by fully trained and capable trauma teams in the event of hostilities—in fact, in deployments for other contingencies as well. The historically larger numbers of non-battle casualties from disease also have been reduced to very small numbers by the military medical system over the last few decades. This reduction in morbidity and mortality depends in great part on the readiness skills of our entire medical staff. Those skills include necessary individual and collective military skills our medical soldiers need to survive on the battlefield and to effectively take part in the overall military campaign.

Inpatient census figures are down in the military just as in the civilian sector. Fewer serious surgical cases are being done at medium sized hospitals, and the staffs there are doing more outpatient, minor surgical cases. The spectrum of injury and illness does not match that seen in the combat zone. No medical professional society or certification board has yet published a list of the minimum number and type of cases that result in trauma care proficiency, although the American College of Surgeons has some total volume guidelines for hospital trauma centers. Using the expertise and experience of our specialty consultants, we are now engaged in developing such recommendations within the Army on this topic. Even before this process is finished, we have begun establishing relationships with outstanding civilian trauma centers so our trauma teams can train alongside their staffs. For example, at

Ben Taub General Hospital in Houston, surgical teams from all services rotate regularly for refresher training in all aspects of complex trauma resuscitation and immediate care. As another example, we have expanded the training and curriculum of our medics so they will be fully Emergency Medical Technician Basic certified as they leave their advanced individual training and join their first unit in the field.

Efforts to maintain the skills we need to reduce death and disability and to keep ourselves effective on the battlefield are Herculean. They take time away from delivery of peacetime health care, and they take funding. With the smaller medical force today, our tempo of operations is high and resulting stresses on families often lead to voluntary separation from service of members who would have stayed for a full and productive career previously. We will stay both competent and ready, but the personal cost is high for our personnel and for their families.

QUESTIONS SUBMITTED TO REAR ADM. KATHLEEN L. MARTIN

QUESTIONS SUBMITTED BY SENATOR DANIEL K. INOUYE

TRI-SERVICE NURSING RESEARCH PROGRAM

Question. Last year because of congressional fiscal restraints the Tri-Service Nursing Research Program had its budget for fiscal year 2001 decreased by one-third from the fiscal year 2000 level. What impact has this had on its ability to conduct and support research? What efforts have been made within DOD to obtain permanent funding?

Answer. The immediate effect was less money available to fund incoming grant proposals for nursing research whose focus is in areas not addressed by other military research programs. For the last two years that the TSNRP has been submitted through the USUHS budget request; it has gone through their budget process as an unfunded item.

ADVANCED PRACTICE NURSES IN THE MILITARY

Question. There have been several initiatives mentioned today regarding improvements to the Military Health System enabling better care for our patient population, what specific role do Advanced Practice Nurses have in this effort to improve access to care and provide quality care?

Answer. Nurse practitioners and certified nurse midwives have the most immediate impact on improving access. Frequently serving as Primary Care Managers of a specified patient population, they assume ongoing responsibility for the patient's health care needs. Key components of their practice include health promotion, health maintenance, patient education and counseling, and management of acute and chronic illnesses.

Certified nurse anesthetists provide comprehensive anesthetic care to their patients. They manage a wide variety of patients in routine and complex situations on shipboard, and at stateside and overseas military treatment facilities. Their superior specialized education and clinical training, enables them to be the sole anesthesia provider at many military sites.

Utilization of advanced practice nurses is crucial to a comprehensive and integrated health services delivery system. By increasing prevention and delivering the right care by the right person at the right time, we increase health, decrease utilization, and expand direct care system access to our active duty and other beneficiaries.

Question. What is the optimum career path for proper utilization of nurse practitioners in the military?

Answer. While there is no one single, specific career path, clinical management of patients is an expectation. Because each nurse practitioner is also a military officer, nurse practitioners may assume administrative positions including department head or director roles, in addition to clinical duties when deemed to be best qualified. Some nurse practitioners have also achieved a blended role as a clinician as well as a leader in executive medicine including Commanding Officer.

OPTIMIZATION OF CARE

Question. Over the last year or so, there has been much discussion about optimization of care as critical to providing an efficient and effective medical benefit. What results have you achieved to date?

Answer. The Military Health System (MHS) Optimization Plan integration was a Navy Medicine calendar year 2000 priority. Those involved in integration efforts describe the time and energy committed to concept education, management tool pres-

entation, networking and other related activities as well invested. Particularly noteworthy during this period have been the heightened collaboration, cooperation and teamwork within and across the Bureau of Medicine and Surgery (BUMED) codes, field activities and operational forces. The following are three of the highlighted tenets of Navy Optimization:

Population Health and Force Health Protection

The Navy Primary Care Optimization Model (PCOM) developed to assist corporate and local level staff in calculating actual and potential enrollment capacity provides baseline health system information. Following the Spring 2000 data call, many commands report moderate capacity increases through implementation of general capacity improvements. The impact of the enrollment increase on private sector care costs is yet to be determined.

Over 86 percent of enrollees have a Primary Care Manager by Name (PCMBN), excluding Regions 1, 2 and 5 where contract modifications delayed PCMBN implementation. Four scenarios are associated with PCMBN assignment difficulties: (1) large tertiary facilities, (2) large operational population, (3) gaps in provider coverage and (4) credentialing delays.

Access and Patient Satisfaction

People, time, space and equipment are the primary means used to increase provider availability, ensure appropriate utilization and increase provider/clinic productivity.

Clinical support has been increased through resource sharing, direct contracting, and internal staff reallocation. Staff additions include appointment personnel, secretarial support and coders. The recent transfer of operational control of the Naval Reserve medical community to BUMED is expected to improve the ability to identify and coordinate reserve support for both provider and clinical support staff.

Time management techniques to increase provider availability include reviewing collateral duties and committee structure to minimize provider involvement; designating specific days and hours for command wide administrative, training and meeting times; and establishing rules to coordinate care team schedules (provider, nurse, corpsman).

To improve bookable hours, many commands have altered clinic hours or changed appointing procedures. Navy Medical Clinic Patuxent River favorably reports on open access appointing and several sites implemented web-based appointing and other e-health initiatives to improve patient access.

Many sites increased the number of provider exam rooms by consolidating administrative spaces. Equipment investments to improve efficiency include auto reminder systems for appointments, advanced phone systems, mobile dictation, voice recognition technologies and pagers for triage nurses.

Fleet/Marine Liaison programs continue to be further developed and most commands report full time liaisons with direct access to senior leadership. Proactive measures to identify and meet the health care needs of operational forces include advance consult reviews, pier side visits, senior leadership visits and appointing privileges for liaison staff.

Business practice

A clinic management course has been developed that will incorporate business rules, roles and responsibilities, data systems, population health and template and schedule management. Its development has prompted discussions regarding the definition/composition of clinical teams and the level of detail needed in clinical and business management processes. The course is now being presented to various MTFs.

Navy Medicine Report Cards published in November 2000 include trend measures for enrollment, capacity, utilization, private sector care, productivity and satisfaction. Although formal procedures to monitor and analyze the report cards are being developed, commands may now use them to appraise their efforts.

Conclusion

Navy Medicine vigorously adopted the MHS Optimization Plan during 2000 and continues to acknowledge the alignment between the MHS Optimization plan and the organization's Strategic and Annual Plan in 2001. In the coming months, the focus will be to: Sustain the momentum and enthusiasm for optimization efforts, establish optimization as a way of being and doing business, ensure continued advancement of those initiatives and issues previously identified, and advance performance measurement aligned with organizational goals and objectives.

Ongoing education and communication, both locally and corporately, is a primary goal.

Clinical practice guideline development and implementation is a near term imperative, as is the development of case management programs. In the future, critical assessment of clinical practice and policy is needed, as are efforts to begin specialty care "optimization." Continued operational force integration and fleet liaison support is also needed.

The first clinic management course is scheduled for March 2001. Other business practice issues requiring ongoing attention, particularly at the BUMED and HSO levels, include data quality and standardized business rules, coding and billing procedures and reserve integration.

Although optimization encourages change, it is not change for change sake. Those leading change efforts must ensure efforts advance the objectives of improved population health, increased enrollment, increased capacity, decreased utilization, decreased private sector care costs, increased productivity, and increased patient and provider satisfaction. Performance targets and regular monitoring and assessment will help ensure proper alignment between optimization efforts.

Question. General Bester and Admiral Martin have the Army or the Navy had problems maintaining the credentialing of their staff's go to war skills?

Answer. The wartime skill requirements are met through a variety of training processes. Deployment skills are practiced on a routine basis with the assigned deployable unit. Each unit has a training plan and specific skills to accomplish for readiness. Trauma training is available in a tri-service effort at the Joint Trauma Training Center in Houston. Teams of specialists receive intensive trauma training to develop and refine wartime skills. Some Navy facilities have agreements with civilian medical centers to rotate staff through for critical care, trauma training, or skill sustainment.

QUESTIONS SUBMITTED TO GEN. BARBARA C. BRANNON

QUESTIONS SUBMITTED BY SENATOR DANIEL K. INOUYE

TRI-SERVICE NURSING RESEARCH PROGRAM

Question. Last year because of congressional fiscal restraints the Tri-Service Nursing Research Program had its budget for fiscal year 2001 decreased by one-third from the fiscal year 2000 level. What impact has this had on its ability to conduct and support research? What efforts have been made within DOD to obtain permanent funding?

Answer. In fiscal year 2000, Tri-Service Nursing Research Program (TSNRP) funded 19 studies. Though awards have not yet been finalized for fiscal year 2001, the decrease in funds will adversely affect the number and complexity of research studies that can be funded. For example, in fiscal year 2000, TSNRP was able to fund two sophisticated and cutting edge telehealth studies. The 33 percent decrease in fiscal year 2001 funding makes it highly unlikely that studies of similar magnitude will receive funding.

TSNRP has been able to provide comprehensive administrative support at much lower costs compared to other similar programs. A decrease in the fiscal year 2001 budget may affect the programmatic oversight and administrative support TSNRP will be able to provide its investigators. There are approximately 80 active studies at the present time. Each research study requires support ranging from monitoring progress to ensuring regulatory compliance. Within the last two years, an additional level of regulatory compliance has been mandated, adding to this already burdensome process.

Earlier this year, nurse researchers, policy makers, and clinicians (from the three services and representing both active duty and reserve components) identified a variety of services that TSNRP could provide to support research: (1) planning, conducting, and disseminating research, (2) cultivating the pool of nurse researchers, (3) providing vital outreach to junior nurses at small facilities, (4) and providing resources to meet the Services' corporate needs. The decrease in the TSNRP fiscal year 2001 budget means TSNRP will only be able to provide very limited support for these essential services identified by the Nurse Corps of all three Services.

Permanent funding for Tri-Service Nursing Research Program (TSNRP) has been discussed at Uniform Services University of the Health Services (USUHS) level. During the last two years, USUHS positioned TSNRP as an unfunded program. Without continued support from Congress, TSNRP is at risk for closure.

ADVANCED PRACTICE NURSES IN THE MILITARY

Question. There have been several initiatives mentioned today regarding improvements to the Military Health System enabling better care for our patient population, what specific role do Advanced Practice Nurses have in this effort to improve access to care and provide quality care? What is the optimum career path for proper utilization of nurse practitioners in the military?

Answer. Advanced practice nurses are dedicated professionals who provide high quality care to their patients as privileged providers. Air Force Family Nurse Practitioners and Pediatric Nurse Practitioners are Primary Care Managers, with an enrolled population that is often larger than their physician counterparts.

Nurse Practitioners (NPs), used in their full scope of practice, complement the physicians' practice by enabling the physician to focus on those patients with more complex medical conditions. They perform health histories and physical exams, diagnose and treat common acute illnesses or injuries, and manage many chronic diseases. Patients report high satisfaction with care by nurse practitioners, because of their individualized attention and focus on health education, health promotion, and illness/injury prevention.

Air Force Nurse Practitioners (NPs) are board certified in their specialty and maintain strong clinical skills. Nurse practitioners demonstrate their versatility in a variety of settings, from small clinics to large medical treatment facilities. Once the NP becomes a field grade officer, there is the opportunity to stay in the clinical career path or to explore progression through an administrative/management track. Our senior NPs can have a robust Air Force career in clinical practice. Those who seek advanced leadership opportunities in positions such as flight commander, squadron commander, and group commander compete very favorably with senior clinicians from other corps.

CIVILIAN HEALTH PERSONNEL RECRUITMENT

Question. In your testimonies today you have noted problems maintaining enough physicians in the military, are there specific issues or obstacles you face in reference to hiring civilian physicians? Are there similar problems hiring enough support staff for physicians?

Answer. According to the Directorate of Civilian Personnel's Recruitment Branch at the Air Force Personnel Center (AFPC), Randolph Air Force Base (AFB), Texas (TX), the biggest obstacle in hiring civilian physicians and other support staff is the pay differential from the civilian sector. For those civilian physicians who do consider civil service, they express interest in not having to worry about the business overhead costs and malpractice insurance necessary for private practice.

The Recruitment Branch at AFPC stated another obstacle in recruitment in a "hot" job market is that some individuals are discouraged by the paperwork necessary for government hiring and opt for opportunities with streamlined hiring procedures where recruiters may fill out the paperwork for them. Some advances have been made allowing individuals to submit a resume as opposed to standard forms, but if mandatory data fields are not listed on the resume, AFPC must contact the individual for the information. By the time this occurs, the applicant may have accepted another job offer.

The Recruitment Branch has started to utilize e-recruitment avenues to advertise and search for applicants. This may provide some relief to identify job openings and search for applicants, but it is critical to respond quickly and obtain necessary information from applicants. The recruiters also mentioned it would be helpful if the job advertisement was "interesting" and "would grab someone's attention," rather than read like a dull laundry list of job duties.

OPTIMIZATION OF CARE

Question. Over the last year or so, there has been much discussion about optimization of care as critical to providing an efficient and effective medical benefit. What results have you achieved to date?

Answer. The men and women of the Air Force Medical Service (AFMS) have made significant progress towards shifting our health care system from one of largely reactive sickness-based medical services into one of proactive prevention-oriented health care where the needs and health status of each individual within our population are assessed and services are provided by the right person, at the right level and the right time. Primary Care Optimization has changed the structure with dedicated staff to support our Primary Care Managers (PCMs), and has changed the process by assigning all enrollees to their own provider, empanelling 1,500 patients to each PCM, implementing medical in-processing, assessing the demand for serv-

ices, enhancing the skill sets of our support staff, and addressing prevention at every visit.

We have several milestones in place to track the process of our clinical and business practice desired end states and these are tracked and reviewed on a recurring basis. Enrollment notification process is in place at more than 90 percent of our medical treatment facilities (MTFs). Our ability to measure our outpatient workload is improving with our BioData Quality Assurance System (BDQAS), and more than 90 percent of our 9 million visits are now being coded. We are well underway to being able to compute our workload by provider based on Health Care Financing Administration (HCFA) national tables. This will allow us to track our reasonableness to the taxpayer in a much more reliable manner.

We know the demographics of our enrolled population (some 1.3 million beneficiaries) and are able to assess the needs and modifiable risk factors in our population. We know the chronic disease burden and the number of visits our patients make so we can predict the demand for our services and better manage our capacity. Our Preventive Health Assessment and Individual Medical Readiness (PIMR) process helps us deliver a fit, healthy, and ready force (our primary reason for being). We are measuring health status improvement and health care effectiveness and efficiency through common metrics in both clinical and business areas. We have improved our screening of cervical cancer, increased childhood immunizations, and improved our delivery of prenatal care given in the first trimester, as a few examples. Our providers use the DOD Clinical Practice Guidelines with associated toolkits and metrics to track progress of standardized care.

Training is central to our success. In the last year, we've started a population health epidemiology course to train our MTF personnel on how to use centrally produced information sets. We will start our primary care optimization (PCO) orientation course this spring and have developed a course specifically for our group practice managers and health care integrators. Our efforts to energize a total community approach are also well underway with our Integrated Delivery System (IDS) and the recent establishment of an AF level Community Action Information Board (CAIB).

There are additional opportunities to improve as we look at more accurate coding to realize better return on Third Party Collections, decreasing preventable admissions, and decreasing lost duty time of our active duty members through programs that help increase physical fitness, decrease tobacco and alcohol use, and prevent injuries. Our Air Staff and MAJCOM representatives have worked hard to formulate sound executable policy and we've invested in a corporate population health support division to ensure we support our MTF personnel as they reengineer our health care delivery system. We are serious about this matter and we've visited every MTF in the past year to evaluate their progress and help them overcome barriers. The first round of Staff Assistance Visits (SAV) is nearly complete with the identification of many best practices. These will be incorporated into the next round of SAVs that will focus on educational needs of the transitioning teams and supporting the MTFs as they put reengineered processes into place.

SUBCOMMITTEE RECESS

Senator STEVENS. Our next hearing will be on March 4th. That is the intelligence briefing for the committee and it will be closed for that purpose—March 14th.

[Whereupon, at 12:11 p.m., Wednesday, February 28, the subcommittee was recessed, to reconvene subject to the call of the Chair.]

DEPARTMENT OF DEFENSE APPROPRIATIONS FOR FISCAL YEAR 2002

WEDNESDAY, MARCH 21, 2001

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

The subcommittee met at 10:05 a.m., in room SD–192, Dirksen Senate Office Building, Hon. Ted Stevens (chairman) presiding.

Present: Senators Stevens, Cochran, Shelby, Inouye, Byrd, Leahy, Dorgan, Feinstein.

DEPARTMENT OF DEFENSE

NORTH ATLANTIC TREATY ORGANIZATION ISSUES

STATEMENT OF GENERAL JOSEPH W. RALSTON, COMMANDER-IN-CHIEF, UNITED STATES EUROPEAN COMMAND

OPENING STATEMENT OF SENATOR TED STEVENS

Senator STEVENS. Good morning.

Senator Feinstein, we welcome you as a new member of our subcommittee. We are pleased to have you join us.

I begin by welcoming General Ralston to the subcommittee. We thank you for the courtesy you extended to our delegation when we were in Europe last month, and we have always appreciated your candor and openness in responding to questions and issues that are raised by our committee.

We are focusing today on the North Atlantic Treaty Organization (NATO), where General Ralston serves as a Supreme Allied Commander, as well as the Commander-in-Chief of the U.S. European Command. A decade ago in a hearing, besides being chaired by my good friend at that time, we have had speculation about how much the former Soviet Union and the Warsaw Pact had really changed. The notion of expanding NATO was a distant and speculative issue, and our military was fresh from its overwhelming victory in the Persian Gulf.

Today we face circumstances where the world around NATO has changed dramatically, but our own military posture in the Alliance has been stagnant and buffeted by repeated rotations of personnel support mission in Bosnia and Kosovo. Secretary Rumsfeld's strategic review, along with the mandated quadrennial defense review affords us a unique opportunity to examine and assess our presence and contributions to NATO. We look forward to the Secretary's report.

General Ralston, we also look forward to your views today and to working with you this year to ensure us that our committee can respond to your needs and the requirements of your command, which we do wish to do.

Senator Inouye.

STATEMENT OF SENATOR DANIEL K. INOUYE

Senator INOUYE. I thank you very much, Mr. Chairman. I wish to join you in welcoming General Ralston.

About 52 years ago, NATO was formed. And there is no question it has been a great success. However, today the Alliance faces a very different situation. The Soviet Union no longer exists, and many of our colleagues question the utility and cost effectiveness of this organization and the requirement to keep about 100,000 troops in Europe.

Others question why our forces are serving in Kosovo and Bosnia and how these areas have come to be defined as vital to the United States of America. Many of your supporters worry about such diverse problems as how the European Union's decision to create its own military will affect NATO, how you can allow emerging democracies to join NATO without unduly alarming the Soviets, how can you ensure that the acquired immune deficiency syndrome (AIDS) epedemic in Africa does not spread to NATO peacekeepers, how you can continue to maintain Operation Northern Watch in the desert safely with increased air traffic in Iraq.

Now, General, these are just a few of the issues I know you face and it obvious that this list is a most challenging one. Over the years we have all worked with you in a number of capacities, and we know you are certainly up to the task. We are fortunate to have you there. We look forward to hearing your views on these many contentious issues. And once again, welcome back to Washington.

General RALSTON. Thank you.

Senator STEVENS. Senator Shelby.

Senator SHELBY. Mr. Chairman, I am going to have some questions, but I will ask that my entire statement be made part of the record.

I do welcome General Ralston and appreciate the job you are doing, General. And it was also great to see you in Belgium, always is.

General RALSTON. Thank you, sir.

Senator STEVENS. Senator Byrd?

Senator BYRD. I will reserve my time for questions. Don't put too much emphasis on the word "reserve." I will just pass until we ask questions.

Senator STEVENS. All right, sir.

Senator Feinstein.

Senator FEINSTEIN. I, as well, Mr. Chairman, will reserve my time for questions. I do want to say I am delighted to be on this subcommittee. And I am delighted to see General Ralston again.

Senator STEVENS. Thank you.

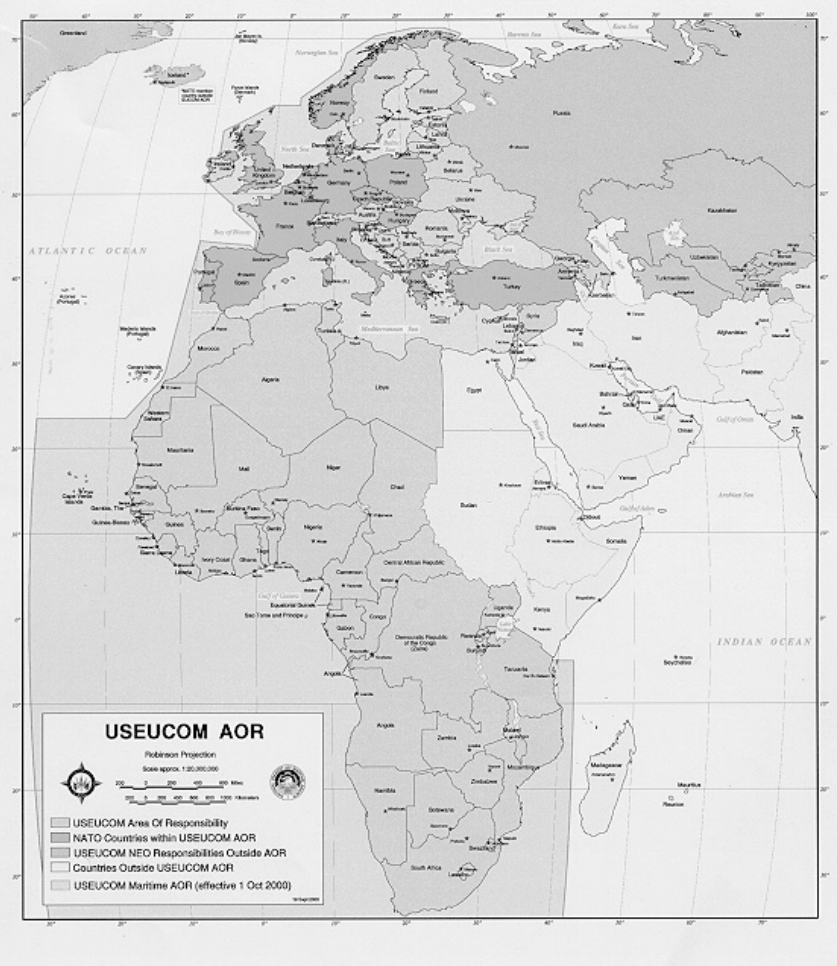
General, we would be glad to hear you.

General RALSTON. Thank you, Mr. Chairman. First of all, I would like to submit my statement for the record.

Senator STEVENS. It will be put in the record in full.

OPENING REMARKS OF GENERAL RALSTON

General RALSTON. And then spend a few moments here talking about some of our operations. But before I do that, I would like to thank you, Mr. Chairman, and members of the committee for your continued interest and for your trips to the area of responsibility (AOR), where you come to visit the soldiers, sailors, airmen and marines that are there trying to do their job.



[Chart 1]

EUCOM'S AREA OF RESPONSIBILITY

I would like to start off with my first chart here. Sometimes people get a little confused about the European Command (EUCOM) AOR. It is really more than Europe. Notice in the area in green is all of the EUCOM AOR. The yellow are the NATO nations that are there.

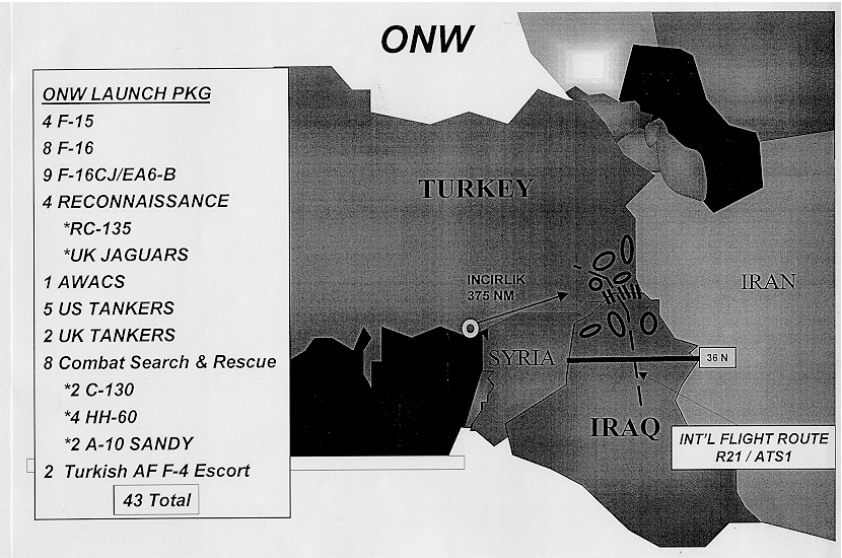
But there are 91 countries in the EUCOM AOR. It goes from the northern part of Norway through South Africa. It actually goes further east than is noted there, because in the purple area is Russia and the former states that were part of the Soviet Union.

In our Partnership for Peace Program, Kazakstan, Uzbekistan, Kyrgyzstan, and Turkmenistan are also members of the Partnership for Peace. So we are engaged throughout a big portion of the world. We have a little over 100,000 uniform personnel in the AOR. And that is obviously one of the things that will be reviewed under the review that is ongoing namely what the appropriate number of forces that you should have forward based in the EUCOM area and in the Pacific Command (PACOM) area.

I would point out for the committee that we have about 8 percent of the uniform personnel in our military stationed in EUCOM. And I would at least make the argument that 91 countries and all of the activities that we are doing with those 91 countries, 8 percent of the uniform military is not too much to pay for that.

I would also point out that from a geographic point of view those 100,000 troops that are forward based in Europe are also very close to the Middle East. And if my colleague, General Franks, needs help in the U.S. Central Command (CENTCOM) AOR, then I have forces that are much closer there than if they were stationed here in the United States.

I would like to talk to you about some operations that we have ongoing, where there are either hostilities currently happening or the potential for hostilities, where American servicemen and women's lives are at stake.



[Chart 2]

OPERATION NORTHERN WATCH

First I would like to talk about Operation Northern Watch. Operation Northern Watch is the activity that we have ongoing out of Turkey over Iraq. And here is a map. You can see Incirlik Airbase is where our forces fly from. It is about an hour flight to the east until they get to the area where the little orbits, the little circles, are.

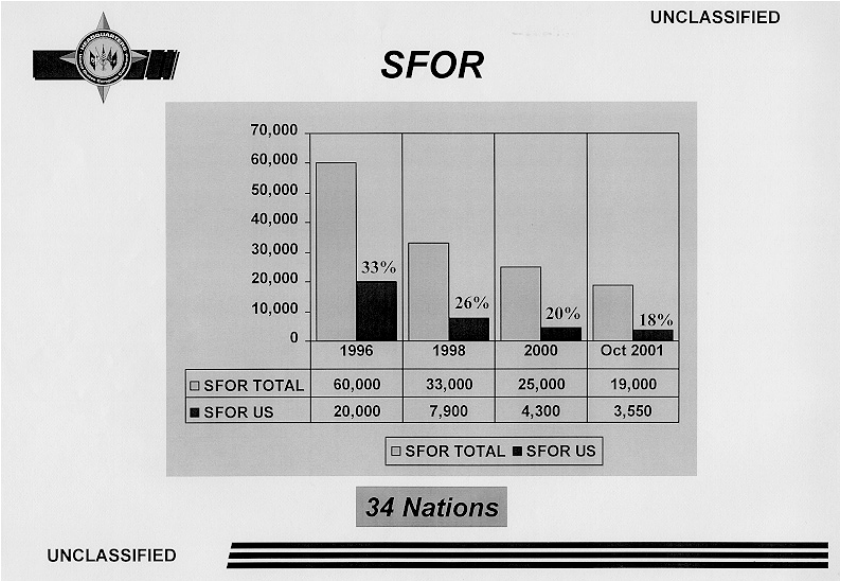
It is quite an operation. If you will notice over here, a typical mission may have 40-some airplanes involved. That is fighters, tankers, Airborne Warning and Central System (AWACS), all of the various things it takes to make that happen.

They will be in those orbits that you see. And then the fighter aircraft that enforced the no-fly zone come down to the 36th parallel. Now you will notice a black line through there. One of the difficulties that we have is, many of the nations are not abiding by sanctions that the United Nations (U.N.) has imposed. Airliners will go down through that area while we have an operation ongoing. That is something that obviously is a fact that we have to take account of.

I might outline the magnitude of the activity. Last year, the year 2000, we flew 7,500 sorties in Operation Northern Watch. Now this is just the northern part of Iraq operation and does not include the south. We were fired upon during those missions over 250 times. We responded to protect our forces over 60 times. That is more than once a week.

Now the reason I point this out is that in every one of these missions there is a risk to American forces. I am not arguing that we should change the policy. That is not my message at all. We should carry out our policy as articulated by our leaders. But I do not want anyone to think that this is a risk-free policy. We have been flying single engine airplanes over Iraq for 10 years now.

And under the law of averages, we should have had engine failures by this time and have lost people over Iraq due to engine failures. I just do not want anyone to be surprised if that happens at times. It is a risk we take. We willingly take that. But it is something that I would like to point out.



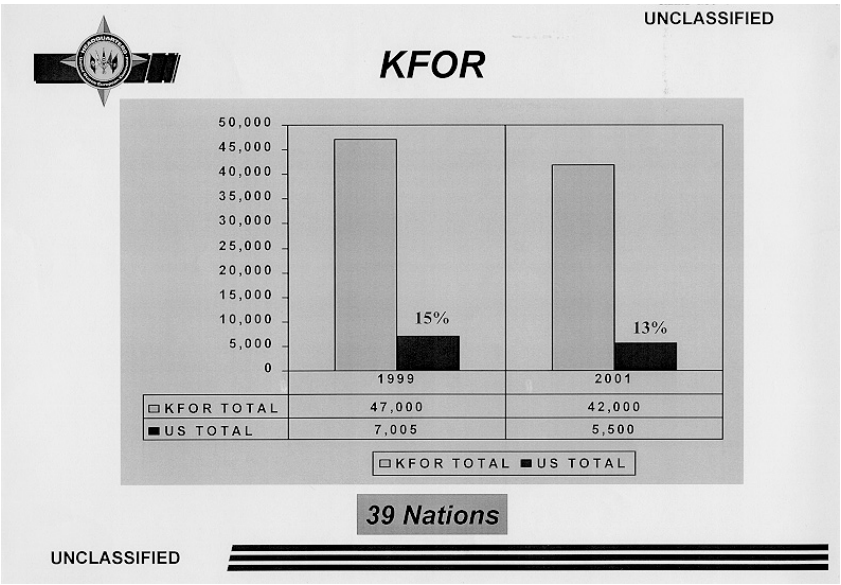
[Chart 3]

BOSNIA

Next, I would like to talk about Bosnia for a moment. There is a lot of discussion about Bosnia. And I think sometimes we forget that a lot of progress has been made. If you look at this chart here, the blue bars are the number of troops that we deploy to Bosnia with. If you go back to 1996, we had 60,000 troops that went into Bosnia. The area in red are U.S. forces. U.S. forces, we had 20,000 or 33 percent of the effort.

Now over the years, as the situation has improved there, we have drawn down the forces that we have in Bosnia. And if you will notice where we are today, in early 2001 I have gotten approval from the administration and from NATO that we can do some further draw-downs. And here by next month we will be slightly less than 20,000 overall. The U.S. contribution to that, about 4,300 today, will be going down to 3,500 and 18 percent of the effort.

So there is a misperception sometimes in people that I talk to that think that the United States is carrying the bulk of the effort in Bosnia. I would just like to point out for the committee here we are 18 percent of the effort, and we have had, I think, a good track record of bringing the forces down as they are no longer needed. I would like to continue that effort as we go on.



[Chart 4]

Next, Kosovo. A similar effort in Kosovo. The blue line that you see there is, in 1999 we had 47,000 troops assigned to that effort. The United States was about 7,000 or 15 percent of the effort. Today in all the effort, in the 42,000 number that you see there, is Kosovo and Macedonia, by the way, the U.S. is about 5,500 people inside Kosovo. And we are about 13 to 14 percent of the effort.

So once again, the other allies, I would contend, are carrying the bulk of the load. But it is important for the United States to share the leadership and show the leadership of this operation.

I know there is a lot of interest in Kosovo and Macedonia. And I thought I would spend a couple minutes on that, if I could.

If you could give me the chart with the map. No, the one behind you with the blue on it.

[Chart 5]

ETHNIC DEMOGRAPHICS

Mr. Chairman, if you can see the map that I have there, notice the area of Kosovo. And to the east and south of Kosovo, I have colored in the map with a dark blue/purple color there. That is Former Yugoslavia Republic of Macedonia (FYROM).

Senator BYRD. Mr. Chairman, we cannot see this blue section.

Senator STEVENS. We will move that around.

Senator BYRD. Thank you.

General RALSTON. Mr. Chairman, if I could stand here for a moment, this is Kosovo right here. Montenegro, Albania, Macedonia down here, and Serbia up here. The area in blue is an area where the Albanian population exceeds 50 percent. And you have Albanians obviously in Albania. Ninety-five percent of the people in Kosovo are Albanian.

And even in Serbia, in the area in blue, the eastern part here, over 50 percent of the population is Albanian. And in Macedonia all down here is greater than 50 percent Albanian. The capital of Macedonia, by the way, is right in the middle of that area. The ethnic overall mix of Macedonia is about 35 percent Albanian and about 65 percent Slavic.

Now the area in Kosovo right now, I think, is in basically pretty good shape. We are making good progress in Kosovo. We are very pleased with that. Not all the problems have gone away. There is still many centuries of hatred that have to be overcome. But for 95 percent of the people inside Kosovo today, they are far better off today than they were 2 years ago or 5 years ago or 10 years ago.

If you happen to be part of the 5-percent minority, life is not good today. And that is something we have to continue to work on.

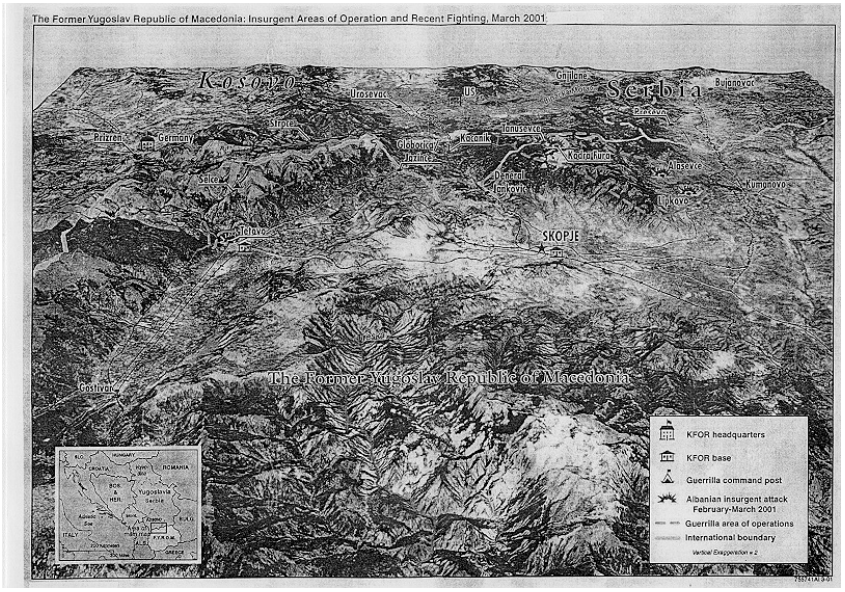
GROUND SAFETY ZONE

We are in the process of returning this red area, called the Ground Safety Zone. This was a zone that was set up when we went into Kosovo to keep the Yugoslav army from threatening the NATO troops, the Kosovo Force (KFOR) that was there. We put a 5-kilometer-wide zone that we did not allow their troops tanks and artillery in there as a force protection method.

As we have had continued democratic change in Belgrade, the chances today of the Yugoslav army attacking the KFOR forces, I think, is very slight. And because of that, we are relaxing the conditions and allowing the Yugoslav forces to come back into that Ground Safety Zone, so that they can take care of the extremist activities that have been going on in there.

CONFLICT ON KOSOVO/FYROM BORDER

The activities itself—and I have a map, if we could pass those maps out to the members, please. You will see on this terrain map that you are about to get, this is looking from south to north, down here, back up into Kosovo. You will see on there the City of Skopje that is the capital of the former Yugoslav Republic of Macedonia.



[Chart 6]

Senator STEVENS. Orient that to this map, will you, please, General?

General RALSTON. Right down here. The capital of the country, Skopje, is about where my finger is inside the blue here. And you will see there is a route, a valley, if you will, from Skopje up into

Kosovo. Now today we have about 3,000 of the KFOR forces that are stationed in the Skopje area. These are logistics troops, supply troops, because all of our supplies come up from Greece through Macedonia on up into Kosovo.

You will notice in the high mountains to the east and to the west of that supply route are two areas circled in brown. And that is where the Kosovo, or—I am sorry—the Macedonia/Albanian extremists are operating. The numbers are relatively small, but it is something that is a problem and that the former Yugoslav Republic of Macedonia is working on.

I would be happy to answer any questions that you have about that map, if you would like to ask, as we go on into the hearing.

Senator STEVENS. Do you have forces near those two brown circles, General?

General RALSTON. No, sir, we do not. We have logistics forces in Skopje. One of the issues that we have is that as our supply convoys go up that route to go between those two mountainous areas, we obviously have to reinforce them with troops.

Senator STEVENS. And the orange spiked area is where the Albanian insurgents attacked in February and March of this year.

General RALSTON. Yes, sir, that is correct.

Senator STEVENS. Have those been intensive?

General RALSTON. If you happen to be at the receiving end of it, yes, sir.

Senator STEVENS. Any numbers of people?

General RALSTON. Our estimate of the extremist is something on the order of 200–300 people. Now, it may be slightly more than that. That is something that is very difficult to do. One of the issues you have is you have that heavy Albanian population that is there in Northern Macedonia. There is support for some of the extremists' efforts.

We are trying to get the word to all of the moderate and responsible Albanian parties that this does their cause no good whatsoever to be carrying out attacks against the government of Macedonia, which is a democratically elected government that does have Albanian participation in the coalition of the government.

Senator STEVENS. I interrupted you. Are you finished, General?

General RALSTON. I have two quick comments, Mr. Chairman.

FUNDING FOR REAL PROPERTY MAINTENANCE MILITARY CONSTRUCTION

As we go through this upcoming budget process, I would like to inform the committee that I have two problems in the EUCOM AOR, only two that I brought forward, that I talked to the Secretary of Defense about, the Defense Resources Board, all the Joint Chiefs. For many years, our real property maintenance and our military construction in the European theater has not gotten the attention that I think that it deserves. Now there are a lot of reasons for that.

As we withdrew our forces from Europe back in the early nineties, we went from 360,000 troops to a little over 100,000. It was a responsible thing to do at the time to say, let us take a timeout here, let us not spend a lot of money on facilities until we figure out exactly where we are going to stay. But, Mr. Chairman, we did

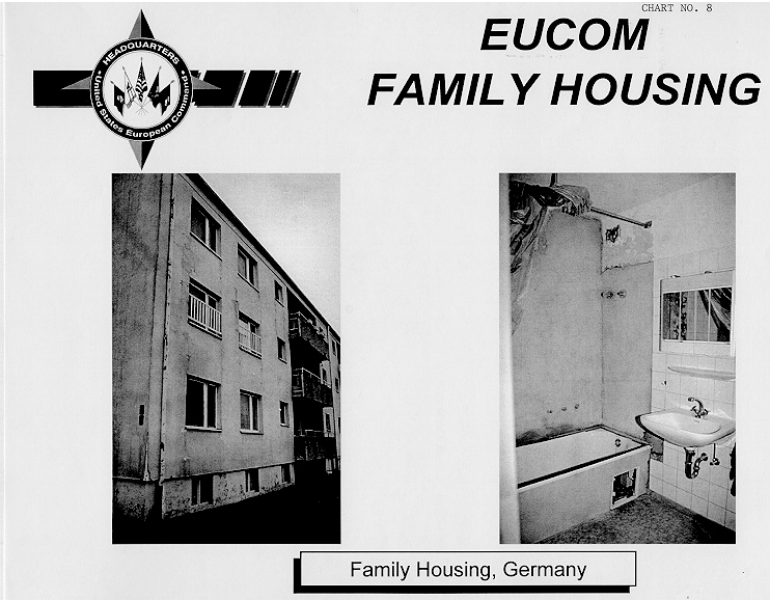
that for the better part of the decade. And I would like to show you some pictures here of what that has resulted in.

[Chart 7]

BARRACKS AND MILITARY FAMILY HOUSING

We have our barracks and our military family housing that is just not in the standard that we should be providing for our American servicemen and women that are serving their country in Europe.

Next slide, please.



[Chart 8]

Our military family housing. The standards we have set for our military family housing, I would submit to you, are not excessive. And let me briefly outline those. We have said if you are a family with the number of children that would qualify you for a three-bedroom house, we have said that we believe you should have two bathrooms in that three-bedroom house. We believe in the kitchen that you should have a stove and a refrigerator, and we believe you should have a washer and a dryer in that house.

Now I do not believe that the American people would think that what I have just outlined to you is excessive. But I must tell you that 69 percent of the Army families that are living in EUCOM today are living in housing that does not meet those standards that I just outlined. And I do believe that we need to do better than that.

These two issues I took to, as I say, the Secretary of Defense. And I do not know what is in the budget right now. I know that we got a sympathetic hearing at the time. And I would just request the support of the committee when that budget comes over to you.

PREPARED STATEMENT

Mr. Chairman, that is all I have. I will certainly entertain any questions that you may have.

[The statement follows:]

PREPARED STATEMENT OF GENERAL JOSEPH W. RALSTON

INTRODUCTION

Mr. Chairman, distinguished members of the Committee, it is my privilege to appear before you as Commander in Chief, United States European Command

(USEUCOM), to discuss the posture of U.S. Forces. First, however, I want to make a few comments about the area in question.

The U.S. European Command encompasses American military activities in over 13 million square miles of the globe and includes 91 sovereign nations. It stretches from the northern tip of Norway to South Africa, and from the Atlantic seaboard of Europe and Africa, to parts of the Middle East and out beyond the Black Sea.

I began my tenure in the U.S. European Command last May. Since my arrival, our men and women have continued to carry out a multitude of operational commitments throughout Europe, Africa, the Levant, the waters of the Mediterranean, the skies over Iraq, and throughout the Balkans in support of the North Atlantic Treaty Organization (NATO), commitments to our regional friends and allies, and our national interests. Additionally, there are new opportunities in this Theater—opportunities that properly approached will further strengthen the international position of the United States. These opportunities include working with African allies to improve their peacekeeping capabilities, engagement with Russia and the countries of the Caucasus region, U.S. influence on the evolving European defense posture and the future of NATO, and the enhancement of important and vital interests to the economic and national security of the United States. Our forward presence in Europe, engagement programs in Africa and Eastern Europe, and the ability to deploy and respond quickly and effectively throughout the region contributes to the preservation of stability throughout much of the Area of Responsibility (AOR).

While success should be acknowledged, we must exercise continued vigilance by pursuing modernization to meet ongoing requirements, as well as develop future forces to take advantage of key strategic opportunities as they arise. Inadequate funding for, and attention to, critical readiness and modernization issues will jeopardize the careful balance between USEUCOM's missions and available resources. Like Operations and Maintenance (O&M) dollars, modernization funding must also be balanced to ensure resources remain proportionate to mission requirements. American military personnel positioned overseas and going about the business of the nation everyday have proven time and again that they are our greatest national resource. Like every national asset, they require care and cultivation to ensure they maintain the capability edge over any potential adversary. Addressing critical quality of life, military construction (MILCON), real property maintenance (RPM), and modernization needs is central toward maintaining this edge.

During my comments today, I will discuss the status of many programs. I should note, however, that the programs I will discuss, and their associated funding levels may change as a result of the Secretary's strategy review that will guide future decisions on military spending. The Administration will determine final 2002 and outyear funding levels only when the review is complete. I ask that you consider my comments in that light.

A CHANGING AND CHALLENGING STRATEGIC ENVIRONMENT

Readiness

Readiness of USEUCOM assigned forces is my top priority. It is the cornerstone of our ability to respond to crises and it enhances our strategy of engagement. Most of our activities relate to readiness because they demonstrate and enhance our capability to deter potential adversaries, while reassuring our friends. Such activities require ready forces and exercise our ability to meet commitments and promote joint and multinational interoperability. Taken together these activities can serve to help shape the international environment by incorporating other nations and improving our multinational expertise in the region; they improve our ability to respond unilaterally or in concert with other nations; and they prepare us now for the uncertain regional requirements of the future.

Thanks to the support of Congress, forces assigned to this Theater are ready and well supported in their current operations. The command's forces are fully engaged and continue to rely upon augmentation and reserve forces to carry out our many diverse missions. Dedicated young men and women valiantly executing a wide variety of operations to support our national strategy make up the heart of our theater readiness. Over the last year, we demonstrated our readiness by supporting air operations over Northern Iraq, NATO-led peacekeeping operations in Bosnia and Kosovo, humanitarian relief operations in Mozambique, and training of Sub-Sahara African troops to support United Nations (U.N.) operations in Sierra Leone.

Joint Training

Training is a primary pillar of readiness and an inherent responsibility of being in command. For USEUCOM, readiness training has increasingly become part of our Theater Engagement Plan. However, over the past two years efforts to cope with

rapidly shrinking training and training-dependent budgets, such as strategic lift, have resulted in several cancelled and restructured exercises. These cancellations have frustrated our efforts to provide high-quality readiness training to meet Theater engagement needs.

Our challenge is to support a proper mix of readiness and theater engagement training within resource constraints. The U.S. European Command has met its Congressional mandates for Chairman of the Joint Chiefs of Staff (CJCS) exercise-related operations and personnel tempo (OPTEMPO-PERSTEMPO) reductions. Additionally, strategic lift funding cuts during this fiscal year may force cancellation of continental U.S. (CONUS)-based participation by Active, Reserve, and National Guard forces in various training and engagement exercises. In a worst case scenario, these cuts may also reduce training and engagement in Israel and Nigeria, and result in cancellation of half of the Joint Combined Exchange Training (JCET) activities in Africa.

After taking a hard look at our training program for potential improvements in quality, effectiveness, and efficiency, we began implementation of a three-year transition plan to take USEUCOM from a training program focused on events, to one focused on readiness and Theater engagement objectives. This revised program will exploit opportunities within the total program, resulting in fewer, but higher quality CJCS-sponsored exercises. I do not anticipate that this transformation of USEUCOM's part of the CJCS exercises in fiscal year 2002 and beyond will result in a significantly less costly program. A requirements-based objectives-driven exercise program will however, provide higher quality training and engagement at a size and cost that is appropriate to, and justified by, our National Security Strategy.

ENGAGEMENT

Side-by-side with readiness activities are the other exercises, operations, and training which focus primarily on assisting and supporting other nations in the region to develop effective democratic political and military systems.

To help guide Congress in its decision-making, many of you have traveled to the European Theater and have witnessed efforts to extend contacts beyond Western Europe through engagement. Over the past several years this process has helped to positively shape our security environment. I believe this approach is key to continued long-term peace, security, and prosperity as USEUCOM works along side, and in active cooperation with, a number of governmental and non-governmental organizations.

Forward Presence

America's permanently stationed forces in Europe number just over 100,000 troops—down from well over 300,000 during the Cold War. The current force level represents a 65 percent reduction from 1990. In my opinion, this must be considered the minimum level needed to execute our current National Security Strategy, meet NATO requirements, and provide support and staging for U.S. based forces that in time of need would flow into or through the Theater.

Key to our engagement efforts are our forward-deployed and forward-based forces, which continue to make significant contributions in protecting U.S. national interests. In peacetime, forward presence of naval, land, and air assets provides unparalleled access to countries in transition. In crises, the forward presence of our forces enables a rapid transition from engagement to response. Forward presence is a critical enabler for USEUCOM activities.

Continued forward presence is vital to implementing our current strategy, as our forces are able to respond more quickly—demonstrated through a number of deployments last year to the Balkans, Southwest Asia, and Africa. Surrendering this forward position would seriously degrade our ability to engage in peacetime or deploy in the event of armed conflict. The General Accounting Office (GAO) traveled through the AOR recently to discuss issues related to forward basing. Their report is due for release this spring and I believe we presented solid evidence of the benefits of forward basing.

Defense Cooperation and Security Assistance

Defense Cooperation and Security Assistance programs are vital components of Departments of State and Defense initiatives supporting the development of interoperable defensive capabilities, the transfer of defense articles and services, and the international military training of foreign military and civilian personnel. Through the medium of 38, and soon to be 40, Offices of Defense Cooperation, we are in partnership with U.S. Embassies throughout the Theater conducting primary military engagement in support of American foreign policy goals.

Defense Cooperation in Armaments (DCA) promotes vital security interests through enhanced cooperation among key defense industries, and between DOD and West European Ministries of Defense. DCA encourages the development of interoperability on the "drawing board" and inherently strengthens U.S.-European military and political relationships.

Likewise, Foreign Military Sales (FMS) of $4.7 billion in fiscal year 2000 to Europe demonstrates the continued primacy for U.S. security interests of Trans-Atlantic defense relationships. FMS encourages interoperability between U.S. and European forces, maintains a strong U.S. presence in the development and implementation of the Defense Capabilities Initiative (DCI), and helps modernize the militaries of new friends and partners in ways critical to our security interests. We in Europe work closely with the Defense Security Cooperation Agency and the Services to ensure that U.S. European Command priorities are reflected.

Foreign Military Financing (FMF) provides irreplaceable resources for our friends and allies, without which U.S. influence over the dynamic transformation of Central and Eastern Europe and key African partners would be affected. The program provides access to U.S. expertise in defense restructuring and management, and enables participants to acquire U.S. military goods, services and training. The new NATO members and the stronger aspirants for membership provide excellent examples of the value of this program.

International Military Education and Training

I cannot overemphasize the importance of International Military Education and Training (IMET) as an integral component of long-term beneficial change in foreign militaries, as foreign military and civilian leaders encounter firsthand the American civil-military culture. The priorities of the program are professional development, the role of the military in a democratic society (under the Expanded IMET initiative, or E-MET), and English language development. In fiscal year 2000 the program trained almost 1,500 military and civilian international students in U.S. military schools, with nearly 550 officers attending professional schools—including senior and intermediate service schools. Under E-IMET, Mobile Education Teams (MET) traveled to 30 countries in the region last year providing instruction to over 2,000 civilian and military personnel in military justice and human rights, civil-military relations, health resources management and integration, defense resources management and budget planning, equal opportunity, and maritime counter-drug law enforcement. Student projections for this year match last year's numbers.

Partnership for Peace

The Partnership for Peace (PfP) Program continues to meet its goal of deepening interaction, extending stability in the East, providing consultation mechanisms for participants who feel threatened, assisting in the pursuit of democratic reforms, and preparing for possible NATO membership. The program has returned huge dividends for operations in Bosnia, with over 30 nations providing support and nearly one-third of the forces coming from non-NATO nations. The growth of the PfP program over the past six years has been dramatic and, in addition to real world operations, Partnership exercises provide superb training and equally important exchange opportunities.

Joint Contact Team Program

The Joint Contact Team Program (JCTP) has been one of USEUCOM's most successful engagement programs over the past nine years. Through modest investments of money, personnel, and expertise, it has helped host nation militaries become familiar with the culture of the U.S. military, and through this process exposed to the best in American values and democratic ideals. By leveraging the expertise of America's active and reserve forces, especially the unique capabilities of the Reserve Component's (RC) State Partnership Program (SPP), JCTP has modeled and demonstrated the best practices of America's military force. It has thus helped host nation militaries move toward providing constructive roles to their developing democracies.

The program's success is most evident in the three new NATO member countries. Poland, Hungary, and the Czech Republic's needs have matured beyond familiarization and exposure—they are ready to "graduate" from JCTP. Their needs must now be met with additional services and technical training properly administered under U.S. Security Assistance programs and plans are now being formulated to move beyond JCTP. Where possible, links to their SPP states will be maintained to facilitate this transition.

This natural transition in the new NATO countries is the realization of USEUCOM's Theater Engagement Plan and is the eventual goal for all of the JCTP countries. This transition also allows the program to move, by close coordination

with the U.S. Department of State, to new host nations requesting the unique engagement capabilities available through JCTP.

State Partnership Program

A key program in this important engagement effort is the Reserve Component's State Partnership Program. SPP grew out of JCTP and uses reserve personnel from various National Guard and reserve organizations to partner with defense ministries of Central and Eastern European countries. Last year was extremely successful as National Guard soldiers and airmen conducted dozens of events including 51 Minuteman Fellowships (MMFs), nine "Guardex" events, six PfP as well as several "In the Spirit of Partnership for Peace" exercises, executed more than 25 percent of all events for USEUCOM JCTP, facilitated civic leader visits, and conducted a number of engagement activities with the Russian Federation. The MMF program bridges gaps in other engagement programs and touches levels of society that other programs cannot reach. Through this program we were able to share with our partners our experience and expertise in education, economic development, disaster response, environmental topics, and numerous other subject areas.

When delegations from Tennessee, Minnesota, Indiana, Alabama, Vermont, Illinois, Kansas, and California conducted civic leader visits to SPP counterpart countries, the long-term vision for SPP had been realized—moving beyond military-to-military contacts into other important elements of society. Through these activities, state civilian officials in the realms of education, commerce, agriculture, medical emergency services, and disaster response exchange their considerable knowledge and expertise with their partner-nation counterparts.

Marshall Center

One of the most important and effective regional engagement activities within the U.S. European Command is the George C. Marshall European Center for Security Studies. The Marshall Center strengthens security and cooperative relationships among key nations within the Theater. It serves as an essential institution for bilateral and multilateral communication and military and civilian exchanges throughout the region.

This organization builds bridges between militaries that once stared at one another through the crosshairs of weapons of war. Under the auspices of the Marshall Center, the once-warring parties of Bosnia came together last year and agreed to slash military spending. Marshall Center graduates have served as peacekeepers in Bosnia and as far away as East Timor. Graduates from Hungary, Poland and the Czech Republic are now helping to integrate their militaries into NATO. Marshall Center programs have led a number of nations to the democratic restructuring of their defense planning and crisis management processes. Graduates from the Republic of Georgia wrote Tbilisi's recently announced national security strategy. Many Marshall Center graduates now serve as ambassadors, defense attaches, chiefs of defense, members of parliament, and advisors to presidents around the world. These graduates possess a deeper appreciation and respect the concepts of democracy as we understand them, and for human rights and the rule of law.

The Marshall Center is at the forefront in reaching out actively and comprehensively to militaries and defense establishments to lower regional tensions, strengthen civil-military relations in developing nations, and addressing critical regional challenges. Open to leaders from over 47 countries, the Marshall Center is a pillar of America's efforts to shape the world in ways that reinforce and reflect our values and national security interests. It is therefore important that the Marshall Center remains fully resourced in order to continue its excellent work in support of American foreign policy objectives.

The Africa Center for Strategic Studies

Drawing on the success of the Marshall Center, the Africa Center for Strategic Studies (ACSS) was established in December 1999 and conducted its second seminar last July in Botswana. While it does not yet have a permanent location to call home, its rotating seminars provide a unique engagement vehicle in Sub-Saharan Africa. Both civilian and military senior defense officials of almost every African nation gather with U.S. and other friendly nation counterparts to examine and compare experiences on national security strategy, defense economics, and civil-military relations. They then validate their impressions in an end of session capstone exercise. Its forum of open, two-way discussion has enjoyed great success on the continent and builds and strengthens bilateral and multilateral relationships.

Near East-South Asia Center for Strategic Studies

In January a year ago the Secretary of Defense approved the establishment of the Near East-South Asia (NESA) Center under the management of the National De-

fense University (NDU), Washington D.C. The purpose of the Center is to enhance regional stability by providing an inclusive, neutral institution where regional military, diplomatic, and national security professionals can broaden their understanding of the national strategy formulation process, examine regional security issues, improve their defense-related decision-making skills, and develop cooperative relationships with one another. Participation is open to military and official civilian representatives of all countries within the NESA region with which the U.S. Government maintains formal diplomatic relations. It is also open to non-NESA countries that have strategic interests in the NESA region. The inaugural two-day conference was held at NDU in November, and the first executive seminar will be held in Washington during May.

African Crisis Response Initiative

The African Crisis Response Initiative (ACRI) is a Department of State training program designed to improve the capabilities of several African nations to conduct humanitarian crisis response and peacekeeping operations. ACRI trained forces could be offered by their governments for peacekeeping and humanitarian operations conducted by the Organization of African Unity, the U.N., sub-regional African organizations, or any other multinational coalition. ACRI also works to shape the African environment by promoting professional and apolitical militaries, reinforcing respect for human rights, and providing a strong example of democratic civil-military relations. This U.N.-approved program of instruction combines U.S. and U.N. peacekeeping and humanitarian relief operations doctrine. Program instruction develops common standards for peacekeeping and humanitarian relief operations among the participating ACRI countries. Recently, the program was expanded to include brigade-level training focusing on the command, control, and logistical aspects of supporting a multinational brigade in the field.

Operation Focus Relief

Last year USEUCOM was tasked to help train five Nigerian battalions, one Ghanaian battalion, and one Senegalese battalion in order to participate in U.N. operations in Sierra Leone, and more strategically, to support the professional development of the Nigerian military—an important force for regional stability. This Operation is being conducted in fiscal year 2001 using State Department peacekeeping operations (PKO) funding as well as DOD resources made available under Presidential Drawdown authority.

To accomplish this mission, Special Operations Command, Europe (SOCEUR) was tasked to execute the mission with Army and Air Force units in support. Based on information provided by the SOCEUR-led Military Survey Team, a ten-week training program using U.S. instructors and an equipment support package was developed. Execution of the train-and-equip program was designed for three-phase completion, commencing last October, with mission accomplishment likely later this year. Upon completion of the training program, each battalion should be capable of operating and maintaining newly acquired equipment, conducting daylight company level attacks and conducting day and night defensive operations as a maneuver company under command and control of a battalion headquarters.

We have now completed phase one of the three-phase program and our personnel have performed magnificently. However, interagency policy-level decisions must be made early enough in the process so funding and resources can be programmed to meet timelines and support requirements. Additionally, human rights vetting must be complete for all personnel to be trained, to include attached units, prior to the initiation of training. There must also be host nation agreement on the training program at every political and military level in order to assure mission success. Operation Focus Relief is not an operation without risk. However, with only 200 plus U.S. personnel assigned in non-combatant roles, the dollar investment is minimal and the payoff great in that it is successfully training local forces to deal with regional problems. In this way, Operation Focus Relief is pioneering a new method of engagement.

KEY THEATER MISSIONS AND CHALLENGES

Challenges in the USEUCOM AOR will continue as the U.S. works to strengthen and maintain the NATO structure, prepares forces to better respond to future conflict, shapes the international environment through engagement, executes contingency operations, and monitors potential future conflict areas. I have highlighted key challenges and continuing missions below to give an idea of the diversity of Theater challenges and missions.

Multinational Interoperability

"The overall effectiveness of multinational operations is * * * dependent upon interoperability between organizations, processes, and technologies." Joint Vision 2020

The U.S. European Command and America's allies and friends recognize that most military operations in the future, from peacekeeping and humanitarian relief to a major theater war, will typically be multinational in character. Success in multinational operations will depend on two factors: the capabilities of the national forces involved in the operation; and the degree to which these forces can be melded to create an effective force. These factors will demand a high level of interoperability and enhanced capabilities between the participating national forces.

In this vein NATO has met and excelled at every challenge since the end of the Cold War precisely because of its ability to commit multinational forces structured to meet military threats to its members. NATO's greatest challenges today originate not externally, but from within. The growing asymmetry in technology between European and U.S. military forces is producing a serious imbalance in our military capabilities. Furthermore, Europe's shrinking defense industrial base and limitations in production of advanced military capabilities could lead to a future where only the U.S. has the ability to engage globally.

The Defense Capabilities Initiative, launched in April 1999, is an effort by the European members of NATO to resolve glaring capabilities shortfalls between them and the U.S. as evidenced by past NATO exercises and Operation Allied Force in and over Kosovo. The Capabilities Initiative's two primary thrusts, improving national capabilities and exploring ways to pool capabilities, allow our allies and partners to enhance interoperability, take advantage of economies of scale, and afford participation by those countries that do not possess the resources to go it alone. The initiative specifically targets five capabilities: effective engagement; deployability and mobility; survivability of forces and infrastructure; sustainability and logistics; and communications/information systems. As Europeans work to improve their national and collective security, we have encouraged defense cooperation and procurement using the DCI roadmap and believe it mutually reinforces the needs of NATO and the European Union (EU).

The DCI's success depends upon whether Europeans are willing to spend more, and more wisely, in narrowing the gap between their military technology and warfighting capability, and our own. Should Europe prove unable to engage in military operations at or near the level of U.S. capabilities, it may leave them vulnerable and limit the U.S. in some cases to unilateral action. Such a future undermines America's strategic vision and assumptions—diplomatically, economically, and militarily. Finite resources and domestic political realities dictate that unilateral action cannot be the future norm. Unilateral action endangers the historical link between the American and European peoples. While the issue of DCI is being worked at the highest levels in NATO, it is critically important that the Congress work to engage their European counterparts on this issue. The U.S. must continue to engage with its European allies to help foster the necessary changes to enable Europe to remain a contributing strategic partner across the spectrum of potential operations. DCI is a crucial area on which the future of a strong Trans-Atlantic link may very well depend.

European Union and NATO Security Structures

The establishment of a common foreign policy, supported by a military capability, within the EU is one of the most important political-military issues facing Europe and the United States today. The European Security and Defense Policy (ESDP) is worked hard, continuously, and at presidential and prime ministerial levels in every capital in Europe. If the military and political links that eventually define the relationship between NATO and the EU do not result in transparency, coordination, and a cooperative effort, it places at serious risk the future of the Alliance. Indeed it is the form these permanent arrangements between the two will take, and assured EU access to NATO's planning capabilities, that are the most contentious and potentially destructive questions currently under debate.

The recently completed Foreign Minister's meeting in Brussels was not able to reach agreement on these issues and will require much effort by the new Administration. We believe that SHAPE headquarters can play a constructive and indispensable role by accomplishing the future military planning for both organizations, thereby negating the need for a duplicative headquarters solely to support the EU.

The European Security and Defense Identity (ESDI) within NATO continues to evolve within U.S. redlines as the EU develops, through the ESDP, both capabilities and institutions for its security and defense aspirations. Even though the progress

to date has generally met U.S. expectations, I would suggest that officials in Washington remain vigilant to ensure that ESDP remains relevant from a U.S. perspective. They should emphasize the requirement for Europeans to develop their capabilities, maintain NATO-EU linkages, and underscore the necessity for the inclusion of non-EU NATO members in emerging security and defense arrangements.

Successful implementation of the European Security and Defense Policy within the European Union will require a concerted effort between the European members of NATO, EU members who are not in NATO, and Canada and the United States. This cooperation is essential to build the military and political links between NATO and the Union necessary to achieve a common strategic vision and make the needed improvements in technological capabilities.

Last November witnessed positive developments in the Capabilities Commitment Conference. This effort has been a primary focus of the French during their six months as President of the EU last year. The planning scenarios used to determine capabilities and forces required for the ESDP Headline Goal Force have remained realistic. In this regard, the EU has commitments for a Rapid Reaction Force (RRF) of up to 60,000 personnel, which is the minimum goal. The EU member countries placed a total of 100,000 troops, 400 combat aircraft and 100 warships at the EU's immediate disposal to support this RRF. If this force becomes reality it is sufficient to establish the EU as a significant military power.

The military staff at SHAPE played a very constructive role in assisting the EU's interim military staff in the development of these goals. The Catalogue of Forces turned out to be impressive, with high-end capabilities that are fully in line with Europe's DCI efforts. My main apprehension regarding capabilities is that they remain compatible with NATO Force Goals once the EU force is established and that the Europeans follow through with the necessary financial commitments to correct identified capability shortfalls.

In my role as the military commander of NATO's forces (SACEUR), I am fully engaged in providing advice and perspective as this issue evolves. In my estimation, if handled successfully by NATO HQ in Brussels and the European Union, the ESDP process will strengthen the security posture of the European continent. However, there are many complicated factors remaining before this capability is realized. The central issue, in my view, is the method by which a plan is developed and presented. When a potential conflict or crisis emerges the planning should be conducted by the SHAPE staff, with EU military augmentation. The Deputy SACEUR would then take the completed plan to the EU and I would send it to the NATO political authorities. If NATO elects not to involve itself, the EU could pick up the mission and deploy forces as required. If the process does not follow this model the EU will be unnecessarily creating large and redundant staffs and a real possibility of double counting and tasking existing NATO forces. Realization of ESDP largely hinges on the Europeans' willingness to make the necessary fiscal and political commitments. Any newly financed capabilities, however, must be in line with DCI—not duplicating but rather reinforcing Alliance capabilities.

NATO Enlargement and Integration

There are currently nine European nations that aspire to NATO membership. While the decision to expand the Alliance is a political one and will ultimately be made in Capitals across Europe and North America, an aspirant's military readiness will be scrutinized and is certainly part of the equation. Thus far, the nine aspirants have benefited from U.S.-funded defense assessments as well as from the NATO Membership Action Plan with its associated Partnership Goals. These mechanisms have provided a valuable roadmap towards reform and interoperability in the event that additional nations are offered NATO membership.

As for the three newest members of the Alliance—Poland, Hungary, and the Czech Republic—the Interagency Group estimated that a 10-year process would elapse before these nations fully transition from past Warsaw Pact doctrine, equipment, and organization to NATO interoperability. One should avoid any unrealistic expectations of full integration this early—only three years since the Madrid invitations. Nevertheless, they have made great progress. Each has performed well in both exercises and deployments, including the very demanding environments of Bosnia and Kosovo where they share the burden through a contribution of nearly 2,500 troops to the international effort.

European Reaction to Missile Defense Deployment

A number of potentially hostile nations are working to develop long-range missiles to coerce and threaten countries in North America and Europe. President Bush has stated that we will deploy missile defenses as soon as possible. These defenses, he

has made clear, must protect not only the United States and our deployed forces, but also our friends and allies.

NATO's Strategic Concept also recognizes that "the Alliance's defense posture against the risks and potential threats of the proliferation of (nuclear, biological, and chemical) weapons and their means of delivery must continue to be improved, including through work on missiles defenses." As the U.S. pursues this capability, I suggest it continues to consult our friends around the world. Open and frank discussions on this initiative between the U.S., NATO, and our other European allies, will further understanding and help avoid alienating our valued friends.

The defenses envisaged will reinforce the credibility of U.S. security commitments and the credibility of NATO as a whole. No one can reasonably argue that Europe would be more secure if the U.S. were less secure from a missile attack. An America able to defend itself from missile attacks is an America better able to defend Europe and common Western security interests. As consultations proceed with Allies on missile defense, we realize they will continue to consider the appropriate role of missile defenses in their respective national security strategies for dealing with the changing international threat environment. In keeping with the fundamental principle of the Alliance that the security of its members is indivisible, the United States is open to discussing possible cooperation with Allies on longer-range ballistic missile defense, just as we have with our discussions and cooperation in the area of Theater Missile Defense.

Force Protection

Force Protection (FP) remains a top USEUCOM priority. We are exercising an aggressive Antiterrorism/Force Protection (AT/FP) program providing clear AT/FP policy, measures, and tools to mitigate risk and maximize security for our personnel and their families. We have implemented a number of innovative AT/FP programs, examining the application of state of the art technology to enhance access control and explosive detection, and are continuing our efforts to field mass notification systems throughout the Theater. We are making progress, but resourcing continues to challenge our AT/FP Service priorities.

U.S. European Command is in the staffing process of publishing a significantly updated AT/FP Operations Order (OPORD) 01–01 prescribing AT/FP standards and requirements. These new mandatory requirements encompass FP engineering design standards for new construction, major renovations, and existing facilities. USEUCOM has also instituted a comprehensive Installation AT/FP Program Manager course to train the unit FP officers in our AT construction and design standards. To date, we have established AT/FP responsibilities for DOD elements and personnel at 67 Chief of Mission locations throughout the USEUCOM AOR.

Coupled with this, 137 AT/FP vulnerability assessments, including 74 Joint Staff Integrated Vulnerability Assessments, have been undertaken over the past year. These assessments have identified AT/FP vulnerabilities and assisted commanders in addressing those deficiencies through the use of countermeasures, procedural changes, and resourcing—endeavoring to eliminate or mitigate their potential exploitation by terrorists.

We have developed and fielded a web-based Vulnerability Assessment Management Program (VAMP). The VAMP captures results of vulnerability assessments, prioritizes AOR vulnerabilities, identifies deficiencies, and lists corrective actions needed or completed. VAMP is a management tool available to every commander and AT/FP officer from the theater down to the installation level and allows commanders and decision makers the ability to track and identify the actions taken or required to correct and/or mitigate vulnerabilities at specific installations throughout the AOR.

We employ risk management and mission analysis processes in all deliberate, crisis, and contingency operational planning and exercises. Threat working groups and assessment tools, such as the VAMP, play a critical role in these processes. In light of recent events these processes are receiving additional scrutiny. Although we cannot eliminate all vulnerabilities, we continue to use risk management when deciding missions in this theater in order to reduce risk to our personnel—identifying vulnerabilities and resources required to reduce exploitable FP vulnerabilities.

Our intelligence operations continually analyze and assess potential terrorist threats to U.S. installations, facilities and personnel. We use a variety of systems to disseminate intelligence within the command and provide routine and time-sensitive threat warning notifications. Our systems and procedures provide the ability to rapidly disseminate information regarding specific terrorist threats to units, installations and individuals throughout the AOR. In conjunction with our national intelligence agencies, we are exploring better methods of sharing and disseminating more accurate AT/FP prediction and tracking threat information. Recently, we initi-

ated closer cooperation with the U.S. Central Command to share and maximize our efforts, including assets, analytical and database capabilities.

While intelligence operations support for AT/FP in Theater is good, we concur with the recent USS Cole Commission recommendation to reprioritize resources for collection and analysis, including human intelligence and signals intelligence, against terrorist threats, and to increase our national intelligence agencies counter-intelligence resources dedicated to combating terrorism.

Balkans

One of the greatest challenges to peace, stability, and democracy in Europe is the integration of the Balkans into the rest of Europe, a strategic objective the U.S. shares with NATO and the EU. Last year saw a watershed opportunity to overcoming that challenge—the toppling of Slobodan Milosevic and the election of Vojislav Kostunica as President of the Federal Republic of Yugoslavia (FRY). It has been clear for a decade that only a change from dictatorship to democracy in Belgrade would set the conditions for a regional approach to the problems in the Balkans. This transition from authoritarian to democratic rule in the FRY should have a beneficial impact on the integration of the entire region into the West. President Kostunica still has much work to do in consolidating democratic gains. While the FRY has begun its re-integration into the Western world, rapidly joining the U.N., the Organization for Security and Cooperation in Europe (OSCE), and the Stability Pact for Southeastern Europe, and establishing diplomatic relations with the U.S. and other key NATO allies, much remains to be done in the Balkans.

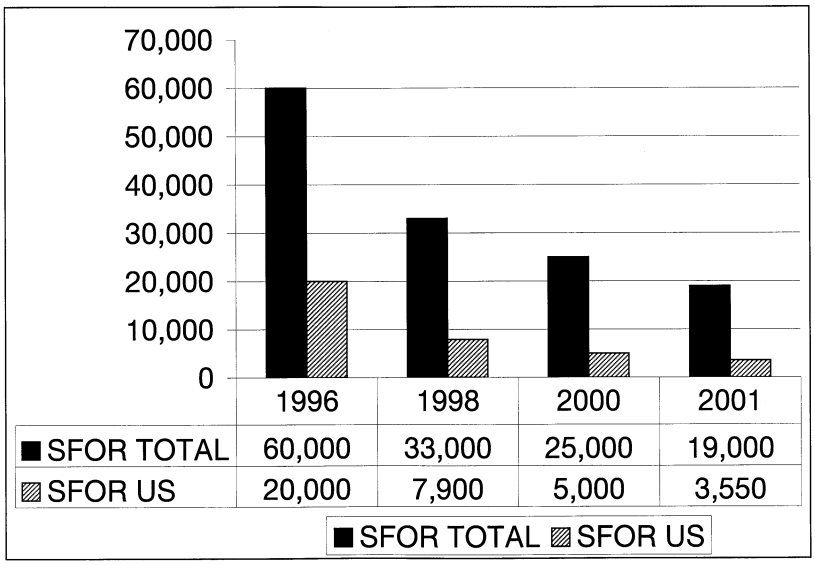
Greater ethnic reconciliation in Bosnia and Kosovo is elusive and while recent voting in Serbia and Bosnia marked another milestone in the rule of law and movement towards democracy, it also reinforced some hard-line nationalist parties and their platforms. Additionally, despite the first democratic elections in Kosovo, where municipal voting saw moderates win, the province is still volatile.

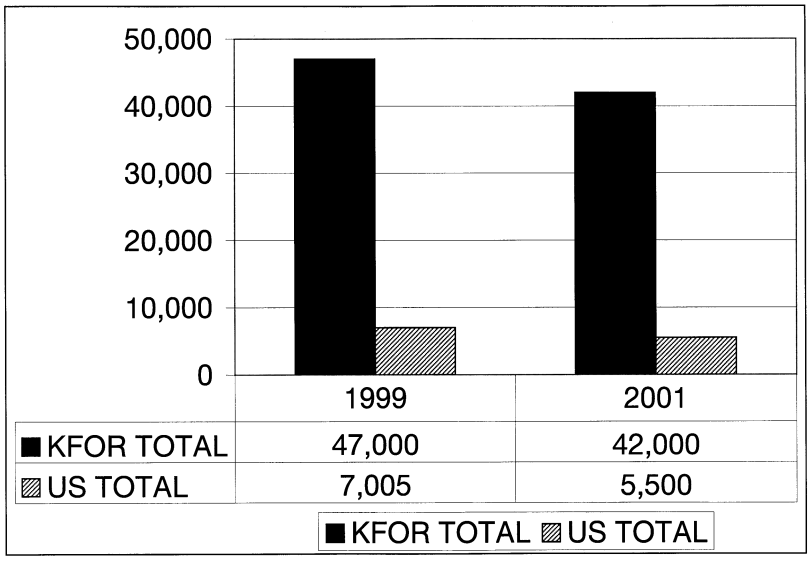
Security conditions permitting the withdrawal of U.S. troops from the region have not yet been fully realized. The status of Montenegro within the federation, a final settlement for Kosovo, and Serbia's future links with the Republika Srpska remain open issues whose resolution are required in order to bring stability and democracy to the Balkans. There is no short-term solution to the problems in the Balkans without developing a comprehensive, region wide, and long-term approach. The economics in the region are driving the turmoil and fractious nature of the "peace." International involvement in the Balkans must include substantive initiatives that address the economic problems of the region. Without such initiatives, we cannot hope to forecast peace.

Military forces, too, must continue to foster an environment in which peaceful actions are rewarded, but do it with fewer resources. This can be accomplished by leveraging existing national and allied exercises that occur across this Theater and by executing them as much as possible in the Balkans. By conducting exercises in the Balkans, we show resolve in the regional policies, deter the outbreak of hostilities, and improve regional infrastructure leading to increased interaction among Balkan peoples.

In Bosnia, force numbers have been reduced from 60,000 when the mission began, to just over 20,000 personnel. Of 34 nations contributing forces to this effort, 28 are European and their forces make up 80 percent of SFOR. The U.S. has successfully reduced its proportion of committed troops from 33 percent in 1996 to 20 percent today. The way ahead in Bosnia, including future force reductions, remains contingent upon the implementation of Dayton's various military and civil tasks. We are working within the Administration to address possible ways to implement the civil tasks and set the conditions for additional NATO force reductions.

The KFOR military effort is considerable and has not changed to any degree since last year. KFOR's strength remains at 37,000 deployed in Kosovo proper and an additional 4,400 supporting in the Former Yugoslav Republic of Macedonia (FYROM), Greece, and Albania. This force is drawn from 39 nations, with 33 European countries deploying over 80 percent of the total. The U.S., with 5,500 troops in Kosovo, continues to provide 14 percent of the force. Europe as a whole has endeavored to live up to its personnel and financial commitments of support to Bosnia and Kosovo. The following charts indicate their specific levels of military troop support:





The U.N. Mission in Kosovo (UNMIK) police force enjoys continued success. Current numbers indicate that 53 nations contribute 4,485 officers. This number represents 95 percent of the U.N. goal of 4,718 police officers. Additionally, the domestic police academy graduated its twelfth class on 3 February and has placed 3,128 multi-ethnic officers on the beat as a result. I can report the U.N.'s policing plan is on target and the effort continues to put 300 plus officer graduates on the street every month to work—and learn—alongside UNMIK's veteran contract officers.

U.S. contributions to NATO are based on The North Atlantic Treaty signed on 4 April 1949. The annual U.S. funding commitment is an obligation to cover approximately one-quarter of the NATO funding requirements as set by consensus of the Military Budget Committee composed of representatives from each of the partici-

pating nations. Once funding is committed, the prestige and credibility of the United States is irrefutable and must be met. Consequently, a failure to provide adequate funding to meet this commitment forces the DOD to reprogram funds from other established mission essential programs. Shortfalls in NATO funding have been chronic in the past and have only served to erode national programs. I encourage Congress to realize that full funding of our NATO commitment will ensure the full execution and realization of national programs, as well as the continued security and stability of Europe as afforded by NATO.

In closing on the topic of the Balkans I do want to make one further comment and that is in regards to the pursuit and eventual apprehension of Persons Indicted for War Crimes (PIFWCs). There are few higher priorities in the international community's efforts in the Balkans than bringing PIFWCs to justice regardless of what you might hear or read, but it is slow and dangerous work. American forces, working alongside their NATO counterparts, are fully committed and one day I am confident these indicted criminals will be delivered to the International Criminal Tribunal for the Former Yugoslavia (ICTY) at The Hague. To date approximately one hundred have been indicted and 71 delivered to the ICTY, killed during apprehension efforts, or have otherwise died. This process will continue until such time as justice is satisfied.

Operation Northern Watch

The Combined Joint Task Force (CJTF) Operation Northern Watch, consisting of forces from the U.S., Turkey, and the United Kingdom, continue to fly dangerous and complex missions in the enforcement of the No-Fly Zone (NFZ) over Northern Iraq, and monitoring Iraqi compliance with applicable U.N. Security Council Resolutions.

In the last few months, however, the situation in the zone has been further complicated by a dramatic increase in the number of international "humanitarian flights" into Iraq, as well as the introduction of domestic Iraqi flights into the NFZ. Coalition forces have taken appropriate measures to ensure that civilian aircraft will not be endangered by ONW activities. There is no guarantee of what actions Saddam Hussein might initiate; however, he has altered his primary strategy from open defiance of ONW presence, to eroding international support for applicable U.N. Resolutions.

Russia

U.S. and Russian soldiers execute common missions side by side against common threats in the Balkans. Our deployed forces have performed ably together and have developed positive and extremely important combined training and operational activities. In spite of five years of operational cooperation and success however, our overall attempts to engage more broadly with Russia are mixed. Ideally, Russia will harmonize its security concerns with NATO, further strengthening stability in the region. A remilitarized or a failed Russia would lead to increased instability and danger not only to its neighbors, but to vital U.S. security interests as well. The U.S. supports favorable developments in Russia with its bilateral engagement efforts, as well as through its support for the stability, sovereignty, and economic development of the Ukraine, Moldova, and the Caucasus' states.

Caucasus

The Caucasus region is vitally important to the United States for at least two major reasons: the impact on the emerging Russian national self-definition, and its capacity to fulfill European hydrocarbon energy deficits. Despite its remoteness from the U.S., the region will have a decisive impact on international political developments in the early 21st Century.

The importance of Caucasus oil and gas reserves, and the necessity of their supply to meet growing European energy needs, comes precisely at a time when Russia is still immersed in its yet to be completed social, political, and economic revolution. It also comes at a time when China is emerging as a major regional economic and political power, with vastly increased energy requirements. Despite this critical time, America has imposed on itself considerable constraints towards our policy and influence in this region.

A key constraint to full American peaceful engagement in this region is Section 907 of the 1992 Freedom Support Act. The Act prohibits government-to-government assistance to Azerbaijan until such time as "steps are taken" to lift the economic embargo sponsored by Azerbaijan against Armenia, with the exception of counterproliferation programs. The DOD applies an "equal treatment" policy toward Armenia to avoid compromising the U.S. position as mediator in the Nagorno-Karabakh conflict. Other subsequent legislation has opened up several narrow "carve out" areas to Section 907 for military and other engagement activities: democratization;

counter-proliferation; humanitarian demining operations; and humanitarian assistance. While these niches have allowed us to initiate preliminary military contacts with Armenia and Azerbaijan, they are extremely narrow and do not allow USEUCOM to respond to both nations' enthusiastic desire for substantive engagement activities.

Were it not for Section 907, Azerbaijan, based largely upon its geo-strategic position, pro-western economic, political, and military orientation, and its abundant energy resources, would be a very high priority for USEUCOM engagement efforts. A stable Azerbaijan is necessary not only for its vast energy deposits, but also to help forestall terrorism and the proliferation of weapons of mass destruction. U.S. policy has had the effect of frustrating Azerbaijan's pro-NATO policy and desires to expand its relationship with Europe and the U.S. I would ask you to take a hard look with the intent of modifying this legislation to afford the opportunity for our military to properly engage with our counterparts in this vitally important region of the world. Such an initiative would strengthen our ability to influence this region for the next generation and beyond.

Armenia has also persistently and vocally pursued at the highest levels closer ties to the U.S. Armenia's motivation lies in its eagerness to balance its historic dependence and partnership with Russia, enlist the U.S. to mitigate historically hostile relations with Turkey, and attract potential economic development assistance and investment that Russia has not been able to provide. In particular, Armenia has asked for our advice on establishing a program of instruction for a national military senior service college and for help in establishing peacekeeping units that could participate in international efforts such as the Balkans. Due to Section 907, however, these are opportunities USEUCOM cannot exploit and we are limited in our efforts to assist these nations in sorting out mutual problems and their futures.

Very briefly, our activity in the case of Georgia has continued to increase since being assigned to USEUCOM's area of responsibility three years ago. Georgia will host its first large multinational NATO Partnership for Peace exercise with USEUCOM support in 2001, providing a good example of the kind of engagement opportunities we are missing in Azerbaijan and Armenia.

Africa

Africa is a complex, diverse, and often dangerous region of the world. Its countries are evolving into clusters of stability and instability, leading in some areas to promising economic growth and democratic government, and in others to stagnation and autocratic rule. A few are simply chaotic due to coups, civil wars, widespread corruption, or lack of an effective government. While this dynamic mix of political trends and institutions will continue for the foreseeable future, the Administration seeks to bolster stability and democratic transformation through a policy of engaging with key partner states and regional "success stories." We who watch Africa closely anticipate fewer African "wars" but an ever-increasing scope of conflict as failed states and the emerging transnational threats and humanitarian crises provide the conditions for instability. Unstable political environments, austere conditions, and asymmetrical threats where the enemy is not clearly defined, either by uniform or position on the battlefield, will characterize the operating environments.

Small programs, such as our Humanitarian Assistance Program (HAP), are key engagement initiatives in Africa that satisfy both DOD and State Department objectives. Small dollar amounts have yielded big dividends in terms of the U.S. military impact in Africa. With approximately $17 million for fiscal year 2001, USEUCOM will be able to complete more than 120 projects in roughly 50 African and Eurasian countries. Engagement through the African Center for Strategic Studies (ACSS), Near-East South Asian Center, African Crisis Response Initiative (ACRI), and the West African Training Cruise (WATC) are also helpful for promoting African stability. Joint Combined Engagement Training with African partners, in addition to giving our Soldiers the chance to improve their capabilities to work in multiple environments, expose African soldiers to the U.S. military, challenging them to improve their professional skills. By leveraging the resources of programs such as these we seek to help shape the African environment in a positive way.

Sub-Saharan Africa

The portion of Sub-Saharan Africa in USEUCOM's area is an immense geographic area comprised of 37 countries and four primary sub-regions, each with significant environmental, cultural, political and economic differences. USEUCOM has identified its three principle objectives for military engagement in Sub-Saharan Africa: promote stability, democracy and a professional military; provide prompt response to humanitarian crisis; and ensure freedom of air and sea lines of communication. By applying resources against established objectives, the intent is to reinforce suc-

cess and work to prevent crises before they occur. There are three critical issues preventing peace, stability, and economic development in the Sub-Saharan Africa region: the war in the Congo (DROC); the conflict in Sierra Leone; and the HIV/AIDS pandemic; all of which are unrestrained by boundaries or borders. Each is a contagion that threatens current and future stability throughout the continent.

With the assassination of President Laurent Kabila on 16 January 2001, the future situation in DROC is uncertain. Joseph Kabila, the late President's son, was sworn in as President on 26 January 2001. Within DROC there are military forces from six different nations participating in the conflict. The countries previously supporting the late President—Zimbabwe, Angola, and Namibia—have pledged continued support to the new government in its civil war. Additionally, the nine countries bordering DROC are significantly impacted socially and economically by the war to varying degrees. The sheer size, geographic location, vast mineral wealth, and economic potential in DROC guarantee that peace in the Congo is inextricably linked to stability throughout the region. The existing Lusaka Peace Accord is the best opportunity to resolve this conflict. President Joseph Kabila recently held a historic meeting with Rwandan President Paul Kagame in Washington in February where both sides pledged to renew efforts to implement the Lusaka Peace Accords. President Kabila also met with Secretary of State Colin Powell the same day. Within the limits of U.S. law and policy, U.S. European Command continues its limited engagement with all parties in an effort to demonstrate neutrality and urge support for the Accord and the U.N. Mission to the Congo.

The situation in Coastal West Africa continues to smolder and destabilize the subregion. While centered in Sierra Leone, this conflict also involves Liberia, Guinea, and Burkina Faso, as well as the sixteen other members, directly or indirectly, that comprise the Economic Community of West African States (ECOWAS). Through support of the U.N.'s mission to Sierra Leone, support to British efforts, and training and equipping countries contributing to the ECOWAS Military Observers Group, USEUCOM works to contain the spread of this conflict, as well as create the conditions for future peace and stability in the region.

Sub-Saharan Africa is the region most heavily infected with HIV in the world. The region accounts for two out of every three of the world's HIV infections, and represents over 80 percent of global HIV/AIDS deaths. The prevalence of HIV in sub-Saharan militaries varies greatly, but it generally exceeds that of the civilian populace. Many militaries have infection rates as high as 20 to 50 percent of the force. As African militaries participate not only in conflicts but also in peacekeeping and humanitarian relief operations outside their borders, HIV follows. We are committed to working with African militaries to contain the spread of HIV/AIDS through education, awareness, and behavior modification.

North Africa

The strategy in North Africa is anchored by bilateral relationships with what USEUCOM sees as two cornerstone countries—Morocco and Tunisia. Recent developments in Algeria have also prompted measured engagement activities with that country. Complementing these bilateral relationships is a developing regional approach to engagement in North Africa and the Mediterranean.

There are three prime sources of tension in North Africa. The first is the Islamist insurgency in Algeria where the government's amnesty offers have persuaded moderate rebels to surrender, while security forces remain engaged in fighting hardliners. The behavior of both the military leadership and insurgents will be critical to the progress of political reform efforts and the environment for badly needed foreign investment. Complete restoration of civil order in the countryside will likely take years, and social tensions will exist long after the conflict. There is optimism, however, as it appears there is a general trend towards greater internal stability.

The second key source of tension is Libya—long a source for concern as its leader, Muammar Qadhafi, continues to pursue the development of weapons of mass destruction and associated delivery systems. Islamist opposition to Qadhafi has found limited popular support and has met with a strong effective response from Qadhafi's security forces.

The third source of tension is the unresolved dispute in the Western Sahara. The King of Morocco, Mohamed VI, has initiated a series of measures to make the administration of the territory more positive, but the U.N.-sponsored process to hold a referendum on the final status of the territory remains bogged down over disagreements about the voter list. At times, this confrontation contributes to dangerous tensions between Morocco and Algeria.

Africa will remain a challenging environment for the foreseeable future. USEUCOM will continue to pursue a program of active peacetime military engagement to shape the region and pursue our objectives with the aim of maintaining sta-

bility and preventing crises before they occur. Solutions to many of Africa's challenges are elusive, but USEUCOM is managing threats and capitalizing on opportunities where we can.

MODERNIZATION AND PERSONNEL ISSUES

Several modernization and personnel issues are being addressed at USEUCOM and I want to highlight some of those that Congress might positively influence and support.

Organizational Transformation Benefits to USEUCOM

There is high probability that there will be repeated demands at the center of the spectrum of conflict, as well as the possibility of high intensity small-scale contingencies. Responding to this reality the Army has articulated a new vision for a strategically responsive and dominant force to effectively meet the full spectrum of future military operations. The Army's "Transformation" will occur in three phases, eventually resulting in the "Objective Force." The Objective Force aims to be able to send a brigade anywhere in the world in 96 hours, a division in 120 hours and five divisions in 30 days. The two divisions in Europe must also meet this standard by resourcing the training, exercises and infrastructure that support strategic mobility. Only through proper resourcing of our two divisions will this Objective Force be able to provide the deployability, maneuverability, and lethality necessary to conduct operations throughout the full spectrum of conflict.

Another key benefit for USEUCOM is the ability to rapidly move lighter vehicles between training areas and countries within this Theater. As a potential force provider to other unified commands, most notably U.S. Central Command, future commanders will find that enhanced mobility of the Transformed Army also enhances deployability. The capability to deploy within a matter of hours to trouble spots in Africa and less developed countries of Eastern Europe offers a range of options that are simply unavailable today.

As the Army transforms it will reduce the logistics tail considerably. By operating from a single family of vehicles, significant efficiencies will follow. Much of the larger and more demanding logistics support activities will occur outside the operational area, reducing the logistics footprint.

Permanently stationed forces will be able to train effectively in the AOR, where many of the training activities of heavier forces will become increasingly problematic. Less noise and disruption of the local populations during movement to and from major training areas (MTAs) make it more likely that permission will be granted for maneuver training off MTAs. This will allow the widely dispersed units of the V Corps to greatly expand maneuver training, at a much-reduced cost.

Similarly, the Air Force transition to the Expeditionary Air Force (EAF) concept has resulted in improved responsiveness in meeting the diverse needs of USEUCOM. Organized into multiple AEFs to support ongoing operations, Air Force personnel are now afforded predictable rotations. This new stability has improved morale, stabilized training, and assured necessary reconstitution time, thereby improving the combat readiness of all involved forces. USAFE forces are integral to the EAF. They provide, in addition to resident combat capability, the backbone that supports ongoing AEF operations over the Balkans and northern Iraq.

Special Operations Forces

An invaluable tool for the effective implementation of our engagement programs is Special Operations Forces (SOF). These forces focus largely on their unique capability to organize and train indigenous forces in internal defense. By interacting with foreign military counterparts throughout the Theater, SOF instills in host nation forces a sense of loyalty and professionalism that support democratic government and ideals. In the process, SOF gains valuable training and cultural experiences from these regional engagements. In fiscal year 2001, Special Operations Command, Europe (SOCEUR) has scheduled 101 JCET initiatives in 52 countries. Special Operations Forces become USEUCOM's force of choice for engaging on the fringes of the Theater in uncertain environments to open new doors and to shape the battlespace in preparation for possible contingency operations.

Reserve Components

Total Force integration means conducting military operations that fully utilize the unique capabilities of the Reserve Components (RC) of all Services. Reserve utilization requires a balanced and proportional approach that considers Service competencies and capabilities and matches those competencies to best support Theater missions. The U.S. European Command's ability to undertake missions is growing

increasingly dependent upon capabilities offered by the reserves and the National Guard.

In an effort to ease active component operational tempo the Services are increasing their use of reserves in contingency operations in the Balkans. The 49th Armored Division (Texas Army National Guard) successfully completed a rotation as the command element of Multi-National Division (North) in Bosnia last October. Their performance was superb and I want to take this opportunity to publicly applaud the great job they did last year. The Navy Reserve contributory support to this AOR for Operations Joint Guardian, Joint/Deliberate Forge and Northern Watch has included filling 89 percent (237,600 workdays) of all Navy billet requirements as of July 2000. The Air Reserve Component provides 60 percent of the total KC–135 tanker aircraft needed for Operation Deliberate Forge providing air-refueling support to NATO aircraft flying missions over the Balkans. At the end of last fiscal year there were 1,244 Guard and 2,775 reserve members on active duty in support of the two operations in the Balkans. The reality is SFOR and KFOR stability operations will continue to require augmentation from the reserve community for the foreseeable future, especially in the area of civil-military operations and peace support operations.

Reserve Components are an increasingly important asset for USEUCOM's operational activities, combined exercises, training, combined education, humanitarian assistance, and security assistance efforts. Reserve support to the Theater, however, is not limitless. There are constraints that require a deliberate and well-thought-out balance of reserve force functions in the total equation of requirements. The requirements of employers and families demand advance notice of deployment and training. Reserve Service members require predictability in order to manage business and personal affairs. Accessibility and volunteerism are factors that require reasonable lead-time to match and mobilize assets to the mission.

The PERSTEMPO management legislation enacted in the Fiscal Year 2000 National Defense Authorization Act will help provide standards and limits for all Service member deployments. While PERSTEMPO management provides stability and predictability for the Service member, it may increase personnel turbulence and cost due to an increased frequency of personnel rotations. Anecdotal evidence has suggested that increasing use of the RC has a negative impact on Service members' personal lives and may affect recruiting and retention goals.

Combat Aircraft Modernization

To a large degree tactical aviation has shouldered much of the nation's foreign policy when that policy called for the use of force. A decade ago Operation Desert Storm commenced with an unprecedented air assault against Iraq's military forces involving hundreds of U.S. aircraft flying tens-of-thousands of sorties around the clock. Since that time American aviators and aircraft have maintained the NFZ over Iraq, and since Operation Northern Watch was established have flown nearly 13,000 fighter sorties alone. More recently we have seen the use of our strike assets over the Balkans to stop the killing in Bosnia and to compel Milosevic to withdraw Yugoslav forces from Kosovo during Allied Force. The demands of modern warfare for precision strike to maximize combat effectiveness while minimizing collateral damage clearly demonstrate the increased need for all-weather/all-target capability. The fact of the matter is, however, many of our tactical aircraft—F–18s, F–15s, F–16s, AV–8s, and A–10s—are aging and nearing service life. Even the F–117 "Stealth Fighter," thought by most to be a new system, has an average age of 9.7 years and relies on dated technology. Currently, possible replacements—the F–22, "Joint Strike Fighter," and F–18E/F—continue in development and are likely part of the Administration's defense review.

Airlift Modernization

Systems modifications are required to keep our airlift aircraft viable particularly for USEUCOM's fleet of C–130s. These airplanes, now approaching 30-years of age, are essential to the success of several USEUCOM mission areas. From support of USEUCOM army units, including combat airdrop and resupply, to execution of humanitarian relief operations, these aircraft are a critical ingredient in maintaining a force projection capability in both combat and during peacetime. It is almost a certainty that the missions and roles this aircraft fulfills will only be more crucial in the future.

Air Traffic Control

The tremendous growth in air traffic and communication industries in Europe presents increasing challenges for air traffic control agencies, civil air carriers, and military aviation. Just as in the United States, the European air traffic system requires significant improvements to increase capacity and reduce delays. At the same

time, expansion of communication technologies is pressuring a limited radio frequency spectrum. To address these challenges, European countries are mandating more efficient air traffic communications systems and avionics. The U.S. has many similar plans; however, Europe is leading worldwide implementation due to its current frequency and air traffic congestion. We have no choice but to equip our aircraft for flight in the airspaces of Europe as well as the rest of the world to allow access to perform our mission.

INTELLIGENCE AND COMMUNICATIONS INFRASTRUCTURE

For the past several years, we have been living in a new operational environment for both conventional and support operations as technological advances change the way our potential adversaries and the U.S. military operate. At the same time, military forces have become the spearhead for several nation-building efforts. To meet these challenges, our intelligence collection and analytical efforts must constantly adapt to keep pace with the evolving intelligence demands associated with these new mission areas. Potential asymmetric attacks, including WMD, terrorism and Information Operations, may be directed not only at our deployed forces, but also at our critical infrastructures.

Intelligence Support to USEUCOM

National agency support, including overhead collection, analysis and reporting, is critical to supporting our operational forces and engagement strategies. While we continue to revalidate our commanders' intelligence requirements and economize our requirements on these national resources, there is no theater capability to complement national collection support.

Defense Intelligence Agency (DIA) capabilities are critical to meeting USEUCOM intelligence needs. In particular, the contributions of the Defense Attaché System provide first-hand insights into the military-to-military relations in each country and timely reporting on crisis situations. The initiative to expand Defense Attaché Office presence in Africa is important to our engagement programs. In addition, DIA is leading a defense intelligence community effort to meet future challenges. This effort includes improvements to the database to enhance future targeting capabilities, increased interoperability between national levels and tactical commanders, and an emphasis on new threats such as WMD and terrorism. The most significant of these is the emphasis on the workforce to ensure the intelligence workforce is capable of meeting these and other threats now and in the future. I am confident these initiatives will shape and improve defense intelligence support for the warfighter.

USEUCOM relies heavily on National Security Agency (NSA) products and services. The actions undertaken by the Director of the NSA to transform the agency into an organization that will successfully respond to future threats of the Information Age are critical to ensuring the safety of our forces. Funding support for NSA's efforts will help mitigate trade-offs during NSA's transformation process, while ensuring the timely deployment of capabilities needed to exploit and defeat modern adversaries. Such funding will have the added benefit of meeting USEUCOM's needs now, and into the rapidly evolving future.

The National Imagery and Mapping Agency (NIMA) provide critical imagery intelligence (IMINT) and geospatial information support and have repeatedly demonstrated its responsiveness to USEUCOM crisis operations. The need to precisely engage targets while minimizing collateral damage requires accurate and timely spatial and temporal intelligence. NIMA initiatives to develop a global geospatial foundation are critical in achieving our operational and engagement objectives. Additionally, NIMA's efforts to provide a critical IMINT tasking, processing, exploitation, and dissemination (TPED) system are crucial in fully realizing the benefits of our next generation imaging satellites. The recent Congressionally-directed NIMA Commission, however, concluded TPED is under resourced overall, and the U.S. cannot expect to fully realize the promise of the next generation of IMINT satellites unless NIMA TPED is adequately funded.

Information Dominance

In conducting our missions and executing our responsibilities, USEUCOM commanders have an indispensable edge: We enjoy "information dominance" that comes from the interaction of superior intelligence and information infrastructures. However, that edge is perishable and is constantly threatened. The section addresses our health in both.

Command, Control, Communications, and Computer Systems Infrastructure

Europe's Command, Control, Communications, and Computer Systems (C^4) infrastructure needs improvement to be able to handle a major crisis. Many USEUCOM networks were built in the 1940s and 1950s to support low-bandwidth voice service, and are simply inadequate for evolving high bandwidth demands, such as worldwide command and control video-conferences, live Unmanned Aerial Vehicle (UAV) video feeds, electronic tasking orders for our air and land forces, theater-wide situational awareness, and full implementation of DOD's Global Combat Command and Control and Global Combat Support Systems. These systems are the foundation of USEUCOM's command and control capabilities.

The Theater's World War II-era infrastructures suffer weather-related degradation in copper cables still insulated with wrapped paper. Increased network loads and failure of critical components cause unacceptable system delays and outages. Many Naval sites in particular are unable to meet the minimum requirements for the Navy/Marine Corps Intranet—their primary information service network. Furthermore, current infrastructure does not support Information Assurance (IA) measures, potentially allowing our collection, analysis, dissemination, and command and control functions, to be jeopardized by hostile or inadvertent interference.

We depend upon information services and network-centric command and control to enable smaller forward deployments, rapidly deployable joint task forces and task force component commands, shorter decision times, and improved force protection capabilities. This reliance makes targeting our networks an attractive option for adversaries unable to field conventional forces against us, and makes IA an absolute must if we are to maintain information superiority, and the integrity of our command and control.

USEUCOM's satellite communications lack flexibility, and capacity is extremely limited. In the event of a major crisis in Southwest Asia, nearly all of our mission-essential communications could be pre-empted by the surge in bandwidth requirements from U.S. Central Command. Realistically, this infrastructure needs to be replaced with modern high-bandwidth capability preferably within the next 5 to 7 years—a significant investment, but one that we can't afford not to make.

Other Areas for Investment and Improvement

Recent process improvements have enhanced coordination and prioritization of scarce intelligence, surveillance, and reconnaissance (ISR) resources across numerous worldwide requirements. However, airborne collectors remain a "low density—high demand" asset. Our ability to penetrate denied and high-risk airspace is critical to deliver the real-time threat awareness to deployed forces in places like the Balkans, Northern Iraq, and the Levant. We need to ensure the development of these capabilities, including long dwell UAVs with both imagery and signals collection capabilities, stays on track in order to deliver necessary warning and force protection in threatening and uncertain environments.

RESOURCES

America's most precious military resource, Service members and their families, are our number one combat multiplier. The well being of the family is one of our top Theater priorities, and is inextricably linked to readiness, retention, and reinforcement of core values, healthy family life, high morale, and mission accomplishment.

Quality of Life

The quality of our housing, medical care, schools, religious services, public facilities, community services, and recreation activities in Europe should reflect the American standard of living—a value we have all pledged to defend. Our most important fiscal year 2000 Quality of Life (QOL) objective was to analyze and quantify the impact QOL has on readiness and retention. We took "expert testimony" from senior enlisted advisors and family members across the Theater. Their conclusions paralleled previous year evaluations with family housing and barracks, spouse employment, childcare and health care, dependent education, and now the work environment consistently identified as lagging the farthest behind.

Military Infrastructure

We have seen many positive results from increased Congressional funding last year and we all applaud and are thankful for Congressional efforts to ensure the readiness of our forward deployed forces and families. Of particular note, the recently added $25 million provided to the Army in Europe to plan and design their "Efficient Basing Initiative" is greatly appreciated, and will prove important as we work to revitalize our existing infrastructure. However, there is still a substantial

amount of work to do to adequately provide for our Service members, civilians, and family members who deserve quality housing, workplace, and community facilities.

Housing, both unaccompanied and family, has improved continuously for the last three years and the outlook is promising. The elimination of gang latrines and the renovation of the barracks and dormitories to DOD's 1+1 standard has been a major morale booster for our troops and our Components are on track to meet the Defense Planning Guidance (DPG) requirement for fiscal year 2008. Military Family Housing throughout Europe as a whole remains old, however, and is well below contemporary standards, and in need of extensive repairs and modernization. Although our housing programs in Europe are generally on track to meet DPG requirements for fiscal year 2010, for the Air Force alone, military housing construction allocations of over $100 million per year for the next decade will be required to achieve minimum housing requirements. Quality housing for military members and their families continues to be a critical element in attracting and retaining the high caliber personnel who make our military forces the best in the world.

With trends in housing and barracks positive, it is now essential to focus our attention on the quality of the infrastructure of our communities and work facilities in Europe. Sustaining, restoring, and modernizing facilities are critical to properly supporting the military mission within the Theater. From runways for our aircraft to the work place for our troops, the infrastructure support for our operations and people has weakened over time. This failing infrastructure is due to almost a decade of placing MILCON and Real Property Maintenance funding at a lower priority than other needs. Significant investments need to be made over the next decade to enhance our warfighter's support infrastructure and demonstrate to our people that they are indeed our most valuable resource.

USEUCOM is aggressively using all available funding sources, including the NATO Security Investment Program, Residual Value, Payment-in-Kind, and any additional funds provided by Congress, such as last year's Kosovo MILCON Supplemental Appropriation, to help reduce costs and meet escalating requirements. Additionally, some European base closures and consolidations will reduce future costs, enhance readiness, and increase effectiveness. Current ongoing efforts include the Army's proposed relocation of an entire brigade combat team currently spread across more than 13 sites, to the Grafenwoehr/Vilseck, Germany area. This consolidation will significantly improve command and control, enhance training opportunities and vastly improve quality of life for the troops and family members—while saving approximately $40 million per year in infrastructure costs.

With our continuing resolve to reduce the footprint while maintaining presence in our AOR, recapitalization has also become a critical issue. Progress is ongoing with the Naples Improvement Initiative nearly completed and construction efforts at Naval Air Station (NAS) Sigonella about to commence. These efforts will provide a significant improvement in both quality of life and service for sailors stationed in the European Southern Region.

These and other initiatives are essential for posturing our forces to better perform their missions, both now and in the future. In the meantime, we will continue to endeavor to help ourselves first and work every opportunity for internal efficiencies through consolidation, privatization, and ensuring maximum benefit from available funding.

Dependent Education

With over half of USEUCOM Service members supporting families with children in school, the quality of DOD's dependent education programs ranks very high in determining QOL for our civilian personnel and Service members. As with many of our other QOL programs, lack of adequate infrastructure funding is the top concern. Since many of our schools are remote, program based staffing is critical to provide a full range of educational opportunity for all students in music, art, and associated after school activities. We must take aggressive action to expand vocational, technical and school-to-work opportunities for our students. Finally, we must work toward establishing an 18:1 student-teacher ratio for kindergarten and to provide a Talented and Gifted program for middle schools similar to what is currently available at our high schools.

CONCLUSION

The U.S. European Command, which I am proud and honored to command, is executing new and exciting missions everyday, while successfully maintaining its warfighting edge. USEUCOM has also been active and has indeed expanded its engagement efforts, working to influence the military evolution of NATO, PfP, and emerging European defense structures. Finally, USEUCOM has seized new opportu-

nities involving Russia, the Caucasus, and Africa, and will continue to seek new openings to expand our relationships.

Although our current posture is favorable and capable of meeting our national security interests, our infrastructure in particular is in need of upgrade and replenishment. Generally, significant increases in funding are necessary to maintain our readiness, continue current engagement efforts, and make the necessary investments to sustain our quality of life.

Without bipartisan Congressional support, USEUCOM would not have been able to realize the achievements accomplished over the past year. On behalf of all personnel in the USEUCOM Theater, I want to thank the Committee for its support.

Senator STEVENS. General, we welcome you, as a great friend, and I want to tell you a little history of when I was a young Senator, a new Senator.

ORIGINS OF HOST NATION SUPPORT FOR U.S. MILITARY

The chairman of this subcommittee sent Senator Hollings and me over to Europe to look into some complaints that we were finding there, receiving there. At that time, those were unaccompanied tours. We found that the wives and children of the young members, they were all male at that time, of our service were following their serviceperson over to Germany, and they were living in all sorts of conditions.

One I distinctly remember is when Senator Hollings and I walked up three flights of stairs and found what we called a cold water walk-up flight with a young woman with two babies in it. She was living off the economy with no allowances at all, because she was not supposed to be there.

We came back, and we developed a policy with the great help of my two colleagues here who are my senior. That was a host country support policy. Unfortunately—we had very great success in Asia—in Germany what you see is what we got. It was better than nothing.

But to a great extent the host country support concept never caught on in Europe. I think now we are paying the price in terms of the facilities that were provided at that time for our families were better than they had then, but they are totally inadequate now.

You make a great point. Unfortunately, I have to tell you they mitigate in favor of our taking some of the troops as much as they mitigate in favor of our putting up more money to augment the housing that our host countries provide, which is inadequate.

I really think that the message that you ought to take back to our NATO allies is that they have been woefully, woefully absent at the table when it comes to meeting some of the costs that we have had there in maintaining those forces for so long. If you compare what Japan and Korea has done, our European allies are just not at the table. And it is a sad thing.

SUPPLY ROUTE REQUIREMENTS IN MACEDONIA

Can you tell me about that map you gave us? The indications are that you probably need a new supply route. Are you working that out?

General RALSTON. Mr. Chairman, you are right. I do not want us to be in a situation where, if things get beyond our control in the

former Yugoslav Republic of Macedonia, that in fact we are without alternatives.

So I have recommended to the NATO, the North Atlantic Council, that we explore alternative routes. For example, a route through Albania to Kosovo, a route through Montenegro to Kosovo. I would not rule out a route through Serbia into Kosovo.

So I think that we do need to look at alternatives. I have made that recommendation to the political authorities at the Alliance. And we will continue to work on that very hard.

FORCE STRUCTURE IN EUROPE

Senator STEVENS. I am sort of reluctant to ask you this question, but I am reminded that President Eisenhower, when he had your position as SACEUR, determined that we should increase our forces in Europe and did so extensively. He did not have available the air expeditionary force concept that the Air Force now has, the mobility of our forces.

And now with the transition of our Army into high mobilized combat brigades, do you really think we need to maintain the force levels we have had there in the past in terms of our military presence in Europe?

General RALSTON. Mr. Chairman, that is a fair question. And this is one of the issues, as I say, that will be looked at by Secretary Rumsfeld in his review. I can only tell you that we have, as you know, taken a significant number of forces out over the past decade. Today we are down roughly to two fighter wings that we have there, two-plus. And we have reduced our Army forces considerably.

ENGAGEMENT

Now one of the things we have to do, if you went and talked to those forces today, they would tell you that they are very busy. They are engaged with our allies, those 91 countries.

I mean, we are working with countries in Africa, throughout Europe, throughout Eastern Europe, working with Russia, working with the former member states of the Soviet Union, because I do not want any of us in the future to look back and say if we had only tried a little harder working military-to-military relationships with Russia or with the former Soviet Union countries, that things may have gone better. As we have talked about before, I think that is a very important aspect of our engagement strategy in the EUCOM theater.

I do not believe that I can ask the troops that are there to continue to do that level of engagement, if I had fewer forces. We would have to cut back on that level of engagement. And again, I would only point out that these forces are much, much closer to the Middle East, if we would need them there. And they do comprise eight percent of our active duty uniform military.

NATO ALLIES FORCE STRUCTURE

Senator STEVENS. Are our allies maintaining their active duty components of your forces as the Supreme Allied Commander?

General RALSTON. Some of them are, some of them are not. This is constantly a subject that I talk to the leadership of each of the nations, as I go around and I visit them. But this is something that will take continued emphasis. It will take continued encouragement and emphasis, I believe, from the political leadership of the United States, as well as the military leadership.

SECRETARY'S STRATEGIC REVIEW

Senator STEVENS. I want to get on to NATO expansion in my next go-around. My last question at this time, General, is, you are our Supreme Commander for the NATO forces and our commander of all our forces in your area, that 91 countries. Are you involved in the current review that the Secretary and his staff are making as far as plans for your part of the command force?

General RALSTON. I have certainly had the opportunity to talk to our new Secretary, to our President, to the Deputy Secretary. I have certainly talked to them about all of the operations that we have ongoing and what we are trying to do. And so I feel that I have the opportunity to make input in that regard.

With regard to the specifics of the ongoing review, I have not been involved with the specifics. This is something that the Chairman of the Joint Chiefs, the Vice Chairman, and the civilian leadership in the Pentagon are working.

Senator STEVENS. Senator Inouye.

STATIONING OF U.S. FORCES IN EUROPE

Senator INOUYE. General Ralston, in following my chairman's questioning, we have been in Europe since 1943. That is about 58 years. There are about 100,000 troops. And many of my colleagues want to be supportive, but they want to know why we should maintain forces in Western Europe, for example.

If we have to have troops in NATO, why not deploy them where the costs may be less, and training facilities greater? Why not go to Kosovo and places like that? There are 69,000 personnel, I believe, in Germany right now.

General RALSTON. We are looking into that. And I will tell you some initiatives that we are looking at. I do believe that we can do a better job of our stationing of our forces in Europe. For example, we have an airborne battalion that is in Italy. They are extremely useful in terms of Southeast Europe, where we have more unstable areas. We are working them very hard.

I believe that it makes sense to give another battalion of airborne forces that would come from elsewhere in Europe, not additional forces to Europe, but to move them more to the southern region.

NON-COMBAT EDUCATION OPERATIONS

We use them a lot for African contingencies, whenever we have to close an Embassy and do an evacuation of American citizens. One of the things that I found out when I was Vice Chairman of the Joint Chiefs, in every one of those countries in Africa that you look at there, there are about 1,500 Americans. There are about 500 official Americans, and there are about 1,000 others. And every

time the government is about to go down, we get the call, "what can you do to evacuate Americans out of country *x*?"

I remember right after I had become Vice Chairman, of the Joint Chiefs, we evacuated 2,500 Americans out of the Embassy in Liberia to safety. And that is something that we stand prepared to do, we have to do. And this is one of the reasons that I believe that we could do a better job of moving our forces around. I made this recommendation back to the United States Army.

We have made this recommendation to the government of Italy. The government of Italy has responded favorably. And that is one of the things that we will be working through in the future.

CREATION OF EUROPEAN UNION DEFENSE FORCE

Senator INOUYE. There are some in Congress who would argue that we should let the European Union develop its own military and get out of NATO. What are your arguments on this?

General RALSTON. Sir, first of all, this is a very serious issue, and a serious subject. For years, we have encouraged the Europeans to do a better job of providing for their defense. And so I have encouraged anything that they will do that will be a positive step in terms of their own defense. But I must also tell you that I think it would be a grave mistake, if they did this at the expense of NATO. And I do not believe it has to be done at the expense of NATO. What I am concerned about is that we keep clear lines of command and control and clear procedures for making decisions.

Let me give you a couple of examples. Today we have the 19 nations in NATO. There are 15 nations in the European Union. And 11 of them are the same. There are 4 nations in the European Union that are not members of NATO: Finland, Sweden, Austria and Ireland.

If you ask me my recommendation, and what I have made back to the Alliance, the right way to do this command and control is to invite those 4 nations that I have just mentioned, send their military planners to the Supreme Headquarters, Allied Power Europe (SHAPE), let them join the other 19 NATO nations that are there.

And when we have a crisis, we will put together military options for the political authorities. We will have option A, which will have a certain set of forces and a certain risk factor. And we will have option B with a different set of forces and different risk factors, and option C.

And then we would provide those three options to the political authorities at the European Union and to the political authorities at NATO. And then both political bodies have the same set of facts to deal with. If we do not do it that way, here is the problem. If the European Union sets up their own military planning operation, they will have options one, two and three, and NATO will have options A, B and C. And when they go to their two respective political bodies, there will be even more confusion than normal in times of crisis.

Secondly, this would be a waste of resources. We do not need to be spending money, and the European countries do not need to be spending money, creating more jobs for generals in more headquarters somewhere. Those are resources that should be put into

the battalions and into the squadrons and into the ships that really make a difference.

And thirdly, if the European Union does that, they will pick battalion *x* to go on an operation. Well, how do they know that that battalion is not committed to a NATO operation somewhere?

So for those three reasons, I think we have to be very careful of the way that we set up the planning structure between the European Union and between NATO. I can only tell you that from my experience. Every day I am confronted with issues where various nations have difficulties. And many of these are historic.

But if the United States of America says this is the way it is going to be, then they accept that. But if we were not there to sort those out, I can tell you that there would be a constant problem among the nations. And this is something that I believe the current setup that we have in NATO is the best way to keep those historic tensions under control.

NATO/EU COOPERATION ON DEFENSE FORCE CREATION

Senator INOUYE. Your proposal is logical and makes good sense. How is our administration, and how are the Europeans responding to your proposal?

General RALSTON. I have had certainly great support within the administration at all levels. This is something that is being actively worked at NATO, as we speak, between NATO and the European Union. I think it is fair to say that most all of the nations, not all, but most all, of the nations, have agreed with the concept that I have outlined. I think we need to continue to work on it.

And this is something that I have told Secretary Rumsfeld I believe is a very, very important aspect. And he agrees with me. And I think he will continue to give it proper emphasis.

Senator INOUYE. Do I have time?

Senator STEVENS. Yes.

AOR RESPONSIBILITIES

Senator INOUYE. I am just amazed at the map there. I have not often seen that map. Your area of responsibility is unbelievably large. You have 91 countries.

General RALSTON. Yes, sir, 91 countries.

Senator INOUYE. I know that you have great ability to lead, but do you think this area of responsibility is too big for one command?

General RALSTON. I certainly would not ask for any more. I think we have—let me explain the set up a little bit.

I have been blessed with a wonderful deputy. I have a Marine four star general, General Carl Fulford, who is at Stuttgart, Germany, which is the U.S. European Command Headquarters. And while I am doing NATO business in many of the countries, General Fulford concentrates to a great extent on the countries of Africa, in addition to the European countries.

Between the two of us, we start every morning talking to each other. We end every night talking to each other. And I think we are doing fine. But it is a large area of responsibility. There is no question about that.

Senator STEVENS. We will come back to you.

Senator Feinstein.

We do follow the early bird rule, General, so Senator Feinstein is next.

Senator FEINSTEIN. Thank you very much.

NATO ACTIVITIES ON FYROM/KOSOVO BORDER

General, in an op ed in yesterday's Washington Post, General Wesley Clark suggested that NATO needed to take a higher profile in helping to end the current violence in Macedonia, including an active role in ending gun smuggling along the border. Do you agree with General Clark's approach on how NATO should deal with Macedonia? If NATO does take a higher profile, what missions do you think are appropriate? What would be your recommendations regarding rules of engagement and exit strategy?

General RALSTON. Well, first of all, let me separate what we can do inside Kosovo and what we could or should do inside Macedonia. NATO, KFOR, are patrolling the border inside of Kosovo. Now I must tell you, though, I do not want to mislead you with that.

I have personally surveyed that border. I have gone in a helicopter that entire border from Serbia across FYROM, across Albania, and stopped at many of the potential checkpoints.

This is an enormously difficult area of terrain. And there are trails that go through those countries that have been in use for centuries, a very, very heavily wooded, heavily mountainous area. And the idea that anyone can seal that border is fantasy. That cannot be. But we are actively patrolling the border. We are capturing every day arms and smugglers that go cross that border. But I am not going to tell you that it is 100 percent.

What are some of the things that we could do that I think would be wise? We are working very closely with the government of Macedonia to provide them intelligence information. We are providing them with pictures that we get from our various systems.

I have requested back to the Joint Staff the deployment of unmanned air vehicles that we could fly along that border and provide that down-linked information into the FYROM government, as well as to the United States and to the KFOR forces.

USE OF UNMANNED VEHICLES

We certainly do not have a mandate from NATO for NATO forces, and there has been no request by the FYROM government for NATO forces to act in a combat role inside of Macedonia. I do not believe, in my own personal judgment, that that would be wise certainly at this time. And I would not recommend it.

But I would recommend that we provide the FYROM government with advice, with equipment, and with intelligence information for them to solve this problem.

This, by the way, is a political problem, not a military problem. This has to do with access to the political process and to the economic process for all the citizens of the former Yugoslav Republic of Macedonia.

Senator FEINSTEIN. So if I understand your answer to the question, it is that we should have a constrained, restricted role in this crisis. I mean, many, many people believed that once the Balkans became inflamed, it would spread to Macedonia and then perhaps even to Greece. It is very surprising that it is happening with the

vigor that it is in Macedonia right now. And I would hate to see those predictions come true.

If I understand you then, our role should be logistical, intelligence providing, sort of behind the scenes, unless that would be reevaluated should there be a formal request from Macedonia to get involved.

General RALSTON. Basically, that is correct, with the exception of inside Kosovo when the KFOR troops are, in fact, actively patrolling the border, and we should do the best job we can to make sure that smuggling and arms and extremists do not enter Macedonia from Kosovo.

NUMBER OF DEPLOYED NATO TROOPS IN KOSOVO/FYROM BORDER

Senator FEINSTEIN. How many troops are on that particular border now?

General RALSTON. We have thousands. We have 37,000 in Kosovo, which is a very small area, by the way. It is one-fourth the size of Bosnia. And by comparison, the most troops we ever put into Bosnia was 60,000. This was back in 1996. By a comparison, if you had 40,000 in Kosovo, you are talking 160,000 equivalent. So it is a very densely populated area of KFOR troops.

On the particular border, the United States has 5,500 troops in Kosovo. Now we have the eastern border all down along that line. And in the German sector, the Germans also have 4,000 troops or so that are there. And they are on that border. So we have thousands of troops that are available for that border control.

Now, once again, I do not want to over-sell this border control area, because this is a very mountainous, difficult area to seal off.

NATO'S ROLE IN THE ARREST OF WAR CRIMINALS

Senator FEINSTEIN. Thank you. One of the unresolved issues of the Bosnian and Kosovo conflict is the question of war criminals. As you know, the 2001 Foreign Operations Assistance Act laid out strict guidelines prohibiting assistance to Belgrade unless Yugoslavia cooperates with the International Tribunal.

If Yugoslav authorities continue to delay in arresting indicted war criminals, such as Milosevic, Mladic, and Karadzic, do you think that NATO has a role in arresting these individuals and transferring them to The Hague?

General RALSTON. First of all, the legislation that you refer to I believe gives them until the 31st of this month to demonstrate compliance. And if they have not done so and the President had not certified that they are complying, then that financial aid would cease. And I certainly support that law and that policy.

What the government in Belgrade decides to do is up to them. I cannot predict them. If you are asking me should NATO go into Serbia to arrest Milosevic or Mladic or Karadzic, that is beyond the mission that NATO has been given. I mean, that is a police mission. This is the responsibility of the individual nation to turn the people that have been indicted for war crimes over to the International Tribunal.

Inside Bosnia that is a different issue. If we know and can find and can capture war criminals inside of Bosnia, we will continue

to do so. I might add, sometimes there is a misunderstanding of exactly what we have done there.

There are approximately 100 war criminals that have been indicted with regard to the Bosnian situation. Seventy-two of those are either in The Hague or have been killed during apprehension or have otherwise died en route to The Hague. That leaves approximately 30 that are still at large. I wish that number were zero. And we are continuing to do everything that we can.

But I believe here is a case where diplomatic and economic pressure on the Belgrade regime is the proper course for this.

Senator FEINSTEIN. Thank you very much.

Thank you, Mr. Chairman.

Senator STEVENS. Senator Shelby.

Senator SHELBY. Thank you.

ESCALATION OF FIGHTING IN MACEDONIA (FYROM)

General Ralston, just to follow up on Macedonia here. This past week we have seen a rapid escalation of fighting in Northern Macedonia. You talked about it a minute ago. NATO Secretary General Robertson has stated that KFOR must stop these border incursions by utilizing a greater number of troops.

It appears to me, General, that our troops are on the front line of yet another ethnic war, and we are about one or two incidents away from being dragged into something as a full-fledged participant. If NATO becomes a combatant, fighting for the stability of the Macedonian government against the rebels, are you concerned that the Albanians in Kosovo could rise up against NATO peacekeepers? It has to be a concern.

General RALSTON. There is always a concern. And this is one of the things that we have tried from day one to make sure that our forces of KFOR operate in an impartial and evenhanded manner. We are against extremism on either side, whether it happens to be Albanian extremists or whether it happens to be Macedonia extremists or whether it happens to be Serbian extremists. I think that the only way for us to operate is to be impartial.

I am concerned that we stay within our mandate and that we operate to provide a safe and secure environment inside Kosovo. The government of FYROM has to deal with the situation that is there, albeit it is a democratically elected government that has been very supportive of NATO and very supportive of KFOR. Therefore, I would recommend that we support them with logistics and materiel and intelligence information. But they have not asked for NATO combat forces in Macedonia. And I certainly would not recommend that at this time, and only *in extremis*.

Senator SHELBY. But it is potentially a real explosive area, is it not?

General RALSTON. Yes, sir, it is.

NATO INOPERABILITY

Senator SHELBY. To move into another area, General, during and after the Kosovo operation, there were reports of inoperability problems within NATO. Some examples of which I was made aware include one multi-level security access of intelligence data, the ability of different units to establish secure communications, and three,

the disparity of investment in precision-guided weapons between the United States and our allies.

Given that the Kosovo experience was NATO's first combat operation, has NATO made improvements in these and other areas which involve interoperability? I think interoperability is something you have talked about before.

General RALSTON. Senator Shelby, yes. And let me say, first of all, they have made some improvement and some progress. But I would also tell you that it is inadequate, and it is not where it needs to be. With——

Senator SHELBY. Where does it need to be?

General RALSTON. It needs to be a lot better. Let me give you an example.

Senator SHELBY. Okay.

General RALSTON. Let me give you a good example and a bad example. The good example is on precision-guided munitions. This is something that, as a result of what was demonstrated in 1999 during the Kosovo campaign, several of the European nations have banded together to buy precision-guided munitions like the joint direct attack munition, the JDAM, for example, and laser-guided bombs.

Many of the smaller nations have done that in a cooperative way, if you will, because they can get a better deal, if they do that. And that is moving forward, and I applaud them for that.

Let me give you a bad example. In the case of Kosovo, our Airborne Warning and Control System (AWACS) airplane had secure radios. The other allied nations do not have secure radios in their fighters. Therefore, everyone had to operate in the unsecure mode. And this unnecessarily endangered the lives of all of the NATO participants. Now—because in this particular case the Serbs are very good at intercepting the radio calls, and they could take action to change the situation and improve their defenses.

This is not a technical problem. We know how to make secure radios. This is not a money problem. If a country can spend $25 million for an airplane, they ought to be able to spend $5,000 for a radio.

Senator SHELBY. What is the problem:

General RALSTON. The problem is the lack of will to do so. And in spite of this being pointed out as a problem in Kosovo, not a single nation has added a secure radio to their fighters since that time. So this is something that I continue to harp on. I continue to tell the nations they have to do better on it.

So I must tell you that in some cases they have made improvements, but in others, it is still lacking.

Senator SHELBY. What are some of the other inoperability problems besides the radio?

General RALSTON. I think that is certainly the bigger area. Our doctrine, we have made a lot of progress on that. I feel good about that aspect of it.

With regard to intel, yes, there are problems there. Some of them are procedural. Some of them are policy. Some of them are technical.

Senator SHELBY. What are you doing there? Are you trying to work that out? That is hard, is it not?

General RALSTON. It is hard, but first of all, we have to make sure the nations understand that it is a problem, and then we try to move forward.

Senator SHELBY. You have to also make sure that they keep the intelligence within a close group, too, do you not?

General RALSTON. Yes, sir, that is exactly right. And that is some of the policy issues.

ARMY TRANSFORMATION

Senator SHELBY. General, can you tell us your assessment of the Army's ongoing transformation to a lighter force? For example, how will this transformation affect future NATO doctrine in operations? And what future do you see for an army in Europe and elsewhere?

General RALSTON. Well, let me talk from the Commander in Chief (CINC) perspective, if you will.

Senator SHELBY. Okay.

General RALSTON. This is something that is very much needed in terms of the United States Army being able to be in a place that I need them to be quickly.

Senator SHELBY. Be able to project force?

General RALSTON. Be able to project force quickly and to be able to do something about it when they get there. Now I have clearly stated this to General Shinseki and to General Keene that I will do everything I can to help them attain that.

I do not believe it is my role to get in and tell them how many wheels ought to be on a vehicle or what kind of wheels ought to be on that vehicle. That is something the United States Army is qualified to do.

But I certainly have encouraged them and continue to encourage them, that they have to get more responsive and be able to project force quicker and to be able to be effective once they hit the ground.

Senator SHELBY. But that is easier said than done, is it not?

NATO FORCE PROTECTION

General RALSTON. It is easier said than done. But it is something we have to start right now.

Senator SHELBY. Although we have been able to do it, a lot of our allies in NATO, the ability to project force is a real problem for them, is it not? Airlift, sealift, everything that goes with it.

General RALSTON. That is exactly right. Now, once again, we have the Defense Capabilities Initiative, the DCI. We have 58 initiatives that we have given to the nations that they should move out on.

Airlift, for example, is one. The nations have said they are going to develop the Airbus A400M aircraft. That is good rhetoric. I appreciate that. But when you look in their budgets, many of them do not have the resources there to do it. So this is something that I think we have to continue pressure on.

Senator SHELBY. And obviously, they are not committed to putting the resources at the moment into what they need to project force, have they?

General RALSTON. This is always a problem.

Senator SHELBY. Thank you.

Thank you, Mr. Chairman.

Senator STEVENS. Senator Byrd.

AIRCRAFT RADIO SECURITY

Senator BYRD. General Ralston, you spoke about the need for security in regard to radios on aircraft. Is that what we are talking about?

General RALSTON. Yes, sir. We were talking about for the NATO allies. We have those radios on U.S. airplanes.

Senator BYRD. Yes. It might be well if our NATO allies would review one of the great battles of the world that took place, I would say, in a goodly distance to the southeast of Trusca, pretty far to the southeast, the battles of Philippi. The battles of Philippi took place 2,043 years ago this year in 42 B.C., 2 years after the assassination of Julius Caesar.

And those battles that took place—this is a matter of just perhaps historic interest. It may not have much bearing on this particular hearing.

In those battles Brutus and Cassius faced off Octavian and Marc Antony. That was the first battle of Philippi. And Brutus defeated Octavian. Cassius's wing, I believe it was the left wing, Cassius was defeated by Marc Antony.

Brutus did not know about Cassius's straits, s-t-r-a-i-t-s. They did not have those little cell phones that we have today. So you see where I am going. If Brutus had had the little logistic instrument that we call the cell phone, he would have known that Cassius was in deep trouble, and he would have redirected, to use the word of the administration right now in its budget talks, he would have redirected some of his forces to the aid of Cassius.

But that did not happen. And after this, Cassius had withdrawn to a hill. Cassius was nearsighted and he saw this group of people approaching. From the descriptions of the group that were given to him by some of his aides, he determined that this must be the enemy approaching to get him. He had already lost part of the battle, you see.

So he detached Titanius, one of his best friends, to do a reconnoitering over here, go see that crowd and see what they are up to. And when Titanius approached, Brutus's people jumped off their horses and embraced Titanius, because they were glad to see him. But Cassius decided that this indeed was the enemy. And to his great chagrin, he had dispatched his best friend Titanius to go out there, and now he assumed Titanius was being taken by the enemy. It was not so at all.

But in any event, Cassius retired to his tent, where his freedman helped him to dispatch his own life with a dagger, the very dagger that he had plunged into the veins of Caesar. So the second battle then took place. This time Brutus against Octavian and Marc Antony.

Now this is all high school history to me. I did not learn it in any college or anything. I just like history, like Cicero. He said, "To be ignorant of what occurred before you were born is to remain always a child."

In any event, Brutus lost; whereupon he retreated to a hill. And his freedman Stratos, I believe it was, helped him to fall on his sword.

Now all that is to say this, again, that if they had had this little cell phone, this great battle, who knows what the future of some parts of the world might have been had they been equipped with this bit of logistics. That is to say, I hope a third battle of Philippi does not take place, and it will be one of the great battles of the world, if it does. And it will be between Greece and Turkey. And we have been concerned about this for a long time.

NEED FOR SUPPLEMENTAL FUNDING

Now let me go to one of the questions. My time may have expired already. But I want to ask you this: I am on the budget committee, just a new member. I am just kind of learning my way around. The U.S. effort to support the NATO operations in the Balkans has been largely funded through supplemental appropriation bills. Do you anticipate needing supplemental 2001 funding to carry out your mission in the Balkans?

General RALSTON. No, sir.

Senator BYRD. You do not.

NATIONAL MISSILE DEFENSE

General RALSTON. Not to carry out the mission in the Balkans, if I heard the question correctly.

Senator BYRD. Yes. So you do not anticipate needing supplemental 2001 funding for that purpose, even with what is happening in Macedonia?

General RALSTON. I certainly do not—we are 6 months through the fiscal year. And I cannot predict what the next 6 months will be. But at this point right now, we were funded in the 2001 appropriation for all of our anticipated needs for 2001.

Senator BYRD. Would you say that again, please?

General RALSTON. Yes, sir. In the case of 2001, the appropriation that we received for the Balkans covers all anticipated needs that we know about for this year. Now again, I will reserve. I do not know what is going to happen in the next 6 months. And I cannot rule it out completely. But at this point, I do not see a need for a supplemental for the Balkans for 2001.

Senator STEVENS. General, can you pull that mike up closer to you, please? Thank you.

Senator BYRD. The key word in your answer, as far as I am concerned, is anticipated. What you have and what you are saying is, as far as all the anticipated needs are concerned, you do not need a 2001 supplemental.

General RALSTON. For the Balkans.

Senator BYRD. Yes. Did we anticipate what is happening now in Macedonia when that budget request was made? The answer is no, I guess. It would have to be, I suppose. You did not anticipate that, or did we?

General RALSTON. I think we anticipated instability in FYROM. We did not anticipate that we would need to introduce United States combat forces into Macedonia, nor do I anticipate that at this point.

Senator BYRD. Well, you do not, of course, at this point. But a conflagration there that could spread to Greece and Turkey would be a far different matter than what you are being confronted with here. Now I do not know whether a supplemental would have anything to do with that or not. It might be that a stitch in time saves nine. And we might begin to anticipate this fighting could spread.

This is what I have been concerned about for years and have mentioned from time to time. Of course, I was assured by General Shalikashvili, I was assured by him a few years back that it would only take about a year to put this problem to sleep. It would only be about a year, a couple billion dollars. Now we are 5 years later and many billions of dollars.

And so I have to say that I am concerned that we are not going to have 2001 supplemental. But that is neither here nor there, perhaps, any further than what I have been asking you.

My final question is this: We hear all this business about a national missile defense. How are our European friends and our allies in NATO taking this, the National Missile Defense? What do you think of it, if you care to say?

General RALSTON. Senator, let me give two answers to that question, if I may. One, it is what I tell my American colleagues that I perceive from the Europeans' perception of this. And then I will come back and tell you what I tell the Europeans from an American perspective.

But the first issue is, how do the NATO allies react to the idea of a national missile defense? My own judgment is that the NATO allies are not so concerned with the idea of a missile defense. Indeed, they are starting to understand the need for missile defense against cruise missiles and against theater ballistic missiles and against strategic ballistic missiles.

But what they are concerned about is a U.S. unilateral withdrawal from the Anti-Ballistic Missile (ABM) Treaty. And if we could come up with a way that the United States did not unilaterally withdraw from the ABM Treaty, either through discussions with the Russians or whatever, then I believe that the concerns on the part of the NATO allies would disappear.

Now the other aspect of this, there are some that would say that if the United States has a missile defense, that that would somehow decouple America from the NATO allies. And I answer them with a story that goes along this way.

Not long ago, there was a Chinese general that said: Don't worry about the United States coming to the defense of Taiwan, because we have a missile aimed at Los Angeles, and they don't want to trade Los Angeles for Taipei.

Now whether you believe that or not, that is a different issue. But I think you would at least have to say that that statement would inject some uncertainty into any President before he made a decision of what to do. Well, let us flip that to the other side of the world. What if an unstable leader in some country said, we are going to launch a missile against Berlin unless they do something we want them to do? And do not worry about the United States coming to the aid of Berlin, because we have one aimed at New York. And they do not want to exchange New York for Berlin.

Well, if the United States has a defense so that you are not subject to blackmail and the President is not subject to blackmail during that kind of event, then we will be a stronger alliance, not a weaker one.

Senator BYRD. Well, the key word in your answer, of course, is if. Well, I guess my time has expired. I would simply say I do not know how a missile defense is going to ever defend this country from submarine launched missiles or from terrorist acts. It is going to be a huge expense.

That will do me for this time around. I congratulate you. I think you are doing a good job.

But I am not sure that we ought not have that supplemental appropriation bill, Mr. Chairman.

Senator STEVENS. I hear you, Senator.

Senator Dorgan.

Senator DORGAN. Mr. Chairman, thank you.

AFFECT OF BALKAN OPERATIONS ON TRAINING AND READINESS

General Ralston, nice to see you. General Ralston, I have been, from time to time, uncomfortable about our commitment in the Balkans. I recognize that what we have done there has created stability and worked out quite well. But we hear criticism by some that our peacekeeping role in Kosovo diminishes the effectiveness and the training of the U.S. military. We have heard that again and again and again.

You and I talked about that in Macedonia some weeks ago. And I was frankly surprised by what you said. Let me inquire again: What does this role mean with respect to training and readiness in our military? Does it diminish it?

General RALSTON. Senator, as we talked about at the time, let me give you my opinion. And I might say that this opinion that I am about to give you is shared by the U.S. Army Europe (USAREUR) your Commander, General Meigs, by his subordinate commanders.

The training that our soldiers are getting in Kosovo today, the training that the young non-commissioned officer and the young officer is getting is superior to what they would be getting if they were in garrison in Germany, because they are out doing real world problems, dealing with real world leadership issues, and dealing with real world small unit combat operations. They are far better off at the platoon level, the company level and the battalion level.

Now what they do not get when they are in Kosovo is their division-level training and their brigade-level training. But this is something that they would not get if they were back in Germany except on about an 18-month cycle. So the idea that they go to Kosovo for six months, where their individual leadership is improved and their small unit training is improved, and then they rotate back to Germany, where they pick up in the cycle their brigade level and their division level, I personally believe that they are better trained, not less trained.

Senator DORGAN. Well, thank you. That is the answer you gave a month or so again, and I think it is important. And I might say that the troops I have met describe the same set of circumstances to me.

FUTURE STABILITY IN THE BALKAN REGION

Let me—I indicated that I have some misgivings about all this, and still do from time to time. Although I certainly support what we are doing there. But the upside is that we create stability and prevent hopefully the spread of hostilities in Macedonia and Greece and so on.

What is the worst case scenario there? You know, all of us want to be positive, but we also should understand that there are worst case scenarios. What are those worst case scenarios that you model in that region? And what are the consequences of it for us?

General RALSTON. Well, there are a whole series of things that could happen. Let me talk about worst case from a military perspective. I think continued instability in Macedonia that we talked about this morning that somehow threatens our supply routes into Kosovo is certainly one you cannot rule it out. And that would be a very severe issue, if in fact we did not have alternate ways to get supplies there. That is why we are working on those alternate routes that I mentioned.

One of the issues that you have is that in fact the Albanian population in Kosovo somehow decides that KFOR is the enemy and not the liberator that they were when they went in. That would certainly increase the risk to our people. Once again, that does not mean that we play favorites on this at all. We have to be impartial. We have to be neutral. We have to be against extremism on any side.

NATIONAL MISSILE DEFENSE

Senator DORGAN. Let me ask a question, General, about national missile defense, following on Senator Byrd's question. You finished your answer by talking about the strengthening of the Alliance. But I assume that you would agree that no alliance is strengthened in this world if the building of a national missile defense system creates a spate of new offensive weapon construction activities in a number of countries, including Russia, China, and others.

It seems to me that if the building of a national missile defense system creates a rush to build new offensive systems in other countries, that nobody is strengthened. Would you agree with that proposition?

General RALSTON. I would agree with that proposition. I do not think I proposed that.

Senator DORGAN. I understand.

General RALSTON. But certainly I am not in favor of people building offensive systems that would threaten the Alliance.

Senator DORGAN. But as a military analyst, would you agree that one of the potential outcomes of our building a robust or not-so-robust national missile defense system is to stimulate an increase in offensive weapons production in other areas?

General RALSTON. I think it is a complex issue. And I cannot tell you that I completely agree with that. Because let me use as an example, the system that has been talked about is a rather modest one. And I firmly believe that what has been talked about in no way, shape or form threatens the Russian strategic deterrent, for example.

So if you somehow—if you ask me the question, do I believe that a missile defense that has been talked about would be cause for the Russians to build more offensive systems, I would not agree with that, because the numbers just would not make sense for them to do it.

Senator DORGAN. Well, the risk of that happening is something neither of us want to see. But let me also ask you this: You described the rumored comment by a Chinese general about trading Los Angeles for Taiwan. It is also the case, is it not, that if we build the national missile defense system that is now being talked about, it would not defend this country against a missile attack by China? Would that not be the case?

General RALSTON. It would certainly defend this country against an accidental launch from China. It would defend against an unauthorized launch from China.

Senator DORGAN. I understand the distinction. I was asking about a decision by China to launch nuclear missiles against this country. Our national missile defense system, as it is currently being constructed, is not designed to protect against that, is that not the case?

General RALSTON. That is correct. It is not designed against a Chinese threat. It is not designed against a Russian threat.

Senator DORGAN. Right. Let me ask you——

General RALSTON. Other than the accidental and unauthorized that I talked about.

Senator DORGAN. I understand. Because I just do not want people to leave with the impression, especially those that are not very familiar with this issue, that somehow a national missile defense system really is going to provide some impenetrable protection. It will not. It is designed against a very limited threat.

TERRORIST MISSILE THREAT

Let me ask one additional question, if I might, if my time has not expired. Would you not agree that the more likely threat by a terrorist would be to say not that we have a missile aimed at Berlin or Los Angeles, but that we have a suitcase nuclear bomb planted in the trunk of a rusty Yugo sitting at a dock in one of those cities?

Is it not more likely that the delivery of a nuclear device to threaten a city would not be, by an ICBM especially, if you are talking about terrorists or renegade countries, but much more likely a suitcase or other device?

General RALSTON. I honestly have no way of quantifying the probabilities of each of those two events. I would hope that both are low, but I cannot tell you one is greater than the other. I would only tell you this, that I think we need to be working against both of those, not against just one.

HIV/AIDS IN AFRICA

Senator DORGAN. And some of us wonder whether we are quite as aggressive in some areas, as opposed to others. But you have been very forthcoming, and I appreciate that. Let me just finally ask you, your area of responsibility is Africa. The AIDS problem in

Africa. What is it doing to the military in those areas where you are working with the military?

General RALSTON. It is a staggering problem. The militaries of some of the nations that we are dealing with have HIV-positive rates ranging from 20 to 50 percent. What this means in the long term on the life expectancy of a nation, I think, is dramatic. I have not been able to think through all the ramifications of what that means. But it is a very, very serious issue.

Senator DORGAN. I ask the question, not because I am less concerned about the general population than the military, but this has profound consequences to the entire continent. And it is a crisis that is more significant than the bubonic plague in the 1300s. It is something we have to deal with. And I was curious as to its impact on the Alliance.

General Ralston, thank you. And let me thank you for your service to our country. I have long been an admirer of your service.

General RALSTON. Thank you, sir.

Senator STEVENS. Senator Cochran.

Senator COCHRAN. Mr. Chairman, thank you.

NATIONAL GUARD AND RESERVES

General Ralston, some of your comments in the latter part of your statement deal with the important new role that Reserve components and National Guard units are playing in the Balkans, specifically in Bosnia where you point out that the Texas Army National Guard provided a substantial force in that area. And I notice that from Mississippi National Guard units, there are going to be over 500 soldiers who will be going over in August to Bosnia for a 6-month deployment.

My question is whether you think the troops who will be entering in this area have been sufficiently trained and prepared so that they are not subject to any unusual dangers because they are not active duty force troops, and whether or not you expect that this is going to have an adverse effect on National Guard and Reserve units in terms of recruiting and retention for those forces.

General RALSTON. Well, first of all let me say that the Reserve component forces that I have personally met and talked to in Bosnia and in Kosovo, whether they be National Guard or Reserve or whether they be Army or Air Force, whatever, they have been absolutely superb soldiers, sailors, airmen and marines. I am very confident in their training. If I had any qualms whatsoever that they were not up to the task, then I would not accept that. I do not believe that is a problem. They have been most professional.

And I, and I think you know this, am a big supporter of the Guard and the Reserve. I have written to General Shelton and asked that Army National Guard divisions be assigned to the European Command area of responsibility (EUCOMAOR), because I think that is the proper thing to do. I think it is the right thing to do. I have tried to take some actions that will relieve some of the stress on the National Guard and Reserve.

For example, we sometimes ask them to sign up for a 270-day commitment before we do that. Why not 90 days? Why not 60 days? Now I am not proposing that every National Guard soldier that comes could come for a short period of time, but there are cer-

tainly some that could. And if by doing that we are able to enhance the volunteer rate of the units, then I think that is something that is a positive step and something that we should do.

Senator COCHRAN. I think our Air National Guard experience from units in our State of Mississippi has been very positive in terms of the volunteerism that is a part of the deployment decisions.

You know, all of you who want to go on a mission, raise your hand. And invariably, there are enough volunteers in recent experiences that have permitted them to deploy to the region and provide a valuable contribution to the effort there.

UNREST IN FYROM (MACEDONIA)

With respect to Macedonia, we are continuing to hear suggestions of the dangers that are growing in that region. And we are all concerned about that. Is NATO going to respond positively to the request for more troops to be introduced into that area to try to reduce the likelihood of an outbreak of new fighting in that area?

General RALSTON. Senator, let me try to clarify some of the things that have been reported in the press. NATO did not ask for additional forces for Macedonia. One of the things the Secretary General said is that we were going to move additional forces down on the border inside of Kosovo. And we have done that.

Now, the issue is, do you need to backfill those forces that were doing other things as those came down to the border. That is something the nations will have to look at. I do know that before I left Belgium yesterday at least one nation had come forward that they were prepared to send additional forces to backfill some of those. So this is not an issue of calling for forces to go into Macedonia. It was an issue of how many forces do you put down on the border to try to control the border from inside Kosovo.

We can do that either by stopping lower priority missions that we would do inside Kosovo or, if the nations come through with troops to backfill, we can continue to do those missions.

RELEVANCY OF NATO

Senator COCHRAN. The threat that NATO is organized to confront was from the Soviet Union in the aftermath of World War II to protect the security interests of Europe, Western Europe, and also the United States. That has changed so dramatically since NATO was first organized and its doctrine and its decisions about where troops would be sent and how they would be trained.

Has NATO become irrelevant to the real world threats that exist in Europe now? I am questioning this because we continue to hear about the declaring integrity and capability of Russia's military.

There are no Eastern European countries that I know of that are building up military forces or threatening Western Europe in any way or the United States. To what extent could we reduce the size of our NATO forces and still provide the level of protection that would be adequate to protect the security interests of the United States and Western Europe?

General RALSTON. Yes, sir. As we had said earlier, I believe, this is an issue that will be looked at in the ongoing review that Sec-

retary Rumsfeld is conducting. So I will not try to predict what the answer will be coming out of that. I can tell you the arguments that I would make in favor.

First of all, I think the NATO Alliance has done a very good job in responding to the instabilities in Europe. And instabilities can come from within, as well as from without. I think one of the things that we sometimes forget is that when the United States withdrew from Europe twice in the past century, we had to go back at great expense in terms of national treasure and in terms of the lives of our servicemen.

We cannot rule that out. One of the things that NATO has done has been a tremendously calming influence and factor. And as Senator Byrd mentioned, we have looked at Greece and Turkey for a number of years and for centuries. But I am absolutely convinced that one of the great strengths of NATO is the fact that both Greece and Turkey are members of the Alliance. They are good members of the Alliance. And they put the interest of the Alliance ahead of their individual interests.

And I do not think we can underestimate the good that then happens. I happen to pick out Greece and Turkey. I could pick out any number of other pairs of nations on the continent.

The fact that we have about 100,000 American forces forward deployed, they are not only there for NATO. They are there for the 91 countries of the European AOR, including places we normally do not think about. Israel, Syria, Lebanon are all part of the European AOR. These forces are available for the Middle East, if they need to redeploy. They are much closer to the Middle East being where they are in Europe than they would be in the United States.

Those are the arguments that I would make for a substantial portion of our forces. By the way, it is eight percent of our uniformed forces stationed in the EUCOM AOR. I do not believe that is too high a percentage for the 91 countries that we are engaged with.

Senator COCHRAN. Thank you very much.

Mr. Chairman.

Senator STEVENS. Thank you very much, General.

I am constrained to remind us all about the divisions that Hitler had in the region that you are involved in now during World War II. And my memory is that he never quite conquered the people of the Yugoslavia area. I hope we do not get drawn into battle with these people in small groups of 100 or 200 and lead to further expansion of actual warfare in that region.

HOST NATION SUPPORT

General, would you be kind enough to give a summary, or ask your staff to give us a summary, of the host nation support of our NATO allies for our forces in Europe for the record?

General RALSTON. Yes, sir, Mr. Chairman. We will provide that for the committee.

[The information follows:]

This data summarizes the host nation support (HNS) provided by NATO allies for our forces in Europe. The data encompasses the past three fiscal years. It is broken-out by the NATO Security Investment Program (NSIP), Residual Value (RV)/Payment-in-Kind (PIK), Prepositioning Contributions of European Nations, Assistance

in Kind (AIK), and contributions supporting the George C. Marshall European Center for Security Studies. This data has been reviewed by U.S. European Command component services that concur with the data below.

[In millions of dollars]

Program	Fiscal Year—			Total
	1998	1999	2000	
NSIP [1]	−3.0	120.0	−49.0	68.0
RV/PIK [2]	0	0	0	0
Prepositioning Contributions	8.5	8.5	8.6	25.6
AIK	17.0	43.7	123.0	183.7
Marshall Center Host Nation Support	2.2	2.3	2.4	6.9
Total HNS	24.7	174.5	85.0	284.2

[1] Amounts represent the difference between U.S. contributions and the funds received for infrastructure projects at U.S. bases in the U.S. EUCOM AOR. This does not include U.S. infrastructure benefits in the United States, Canada, and Iceland. It also does not include U.S. benefits from NSIP-purchased communications systems and satellite rental.
[2] RV/PIK funds are reimbursement for U.S. capital investment.

NATO MILITARY CONSTRUCTION (MILCON)

Senator STEVENS. I would like to ask you to explore an initiative, that is, I understand you are going to be asking for substantial military construction monies for the European area in particular under your command. I would like to see what the response would be to amassing a fund requirement from our NATO allies. They built that housing originally. Now, as I understand it, our command is asking us to replace that housing.

I should think that those nations would at least be willing to meet us halfway in terms of providing the kind of facilities that our men and women in the armed services demand now there.

I am not sure that Congress is going to react too favorably to a total assumption of responsibility for the activities and efforts that the nations have provided in the past. That was host nation support housing in the first instance, according to my memory. Is that correct?

General RALSTON. Mr. Chairman, I will have to go back and provide for the record what the historical track on that is. I understand the substance of your question, and I will certainly take that for action and work that.

What we are talking about in many cases here is real property maintenance just to work on the houses that are there. It is not necessarily a replacement of the housing, but let us try to bring them up to the modern standards.

[The information follows:]

The majority of the Family Housing and Unaccompanied Housing that troops and their families occupy in Europe were initially provided to the United States following the end of World War II. The United States moved in to these facilities while serving as the Occupational Force after the war. The host nation, by and large Germany, allowed U.S. forces to remain in these facilities ever since. Unless the land was purchased or new facilities built on these installations by the United States, the host nation owns the facilities and the land. The United States pays no lease costs for these facilities, but rather is charged with the maintenance and improvement costs for the facilities that they occupy.

Host nations throughout NATO where U.S. forces are stationed provide significant support to the United States in terms of the NATO Security Investment Program (NSIP) and the opportunity to reside in their facilities essentially rent free. Additionally, if any improvements are made to existing facilities and then these fa-

cilities are returned to the host nation, negotiations between the United States and the host nation occur to determine an acceptable settlement for the returned facilities.

While support for facilities housing U.S. forces in Europe is minimal, every NATO country provides significant military forces as well as critical infrastructure that strengthens NATO capabilities. Expenditures within their defense budgets to ensure their forces meet NATO requirements are essential to the success of NATO. These investments have generally hindered additional funds from being spent supporting other forces within their country. Additionally, the investment of more than $500 million annually by the NATO countries (less the United States) into the NSIP budget has resulted in significant benefits to the U.S. installations and a dedication to the role of NATO.

Senator STEVENS. I think that is absolutely necessary, if we are going to continue to have our people there, particularly on accompanied tours. Under the circumstances, many of them have children. And those barracks were not built for children, so I think you are absolutely right, we are going to have to do something about it.

But I think it is going to be a reluctant Congress, as far as military construction of any great extent in that area, until we see some greater response from our allies to the responsibilities that our other host nations have recognized, as far as Korea and Japan and other areas of the world.

Anyone else have a last question? There will be a vote here in just a minute or two.

CLOSING REMARKS

Senator Byrd.

Senator BYRD. Just to compliment you and Senator Inouye on the constant good work you do in the funding and needs of our national defense. And you are on the firing line every day, just like General Ralston and his troops. I have been on this subcommittee a long time. But I have not attended the meetings of the subcommittee probably ten percent of what you and Senator Inouye do. We kind of lean on you. I do. I lean on you.

God knows, and he does, that our time is terribly fragmented as Senators. So we cannot all give time to the same subcommittee. But you do a remarkably good job. You know the facts that are in these bills. And we have good reason to depend on you. And that takes a lot of your time and a lot of your strength. But you are highly dedicated.

And I just want to say that for the record as one member who has observed your constant attention, your patriotic devotion and dedication to this important work.

Senator STEVENS. You are very kind, Senator. Senator Inouye and I wish we could get frequent flyer miles for our military miles, but we do not get them.

And the same to you, General Ralston. I know your schedule.

The general was with us in Athens at the Special Olympics ceremony, then he was with us when we went to Kosovo, and then he was back here again to meet us.

I think you demonstrate the need for adequate airlift for our supreme commander. We are glad to see the way you use it, and I do appreciate your hosting us in Belgium, as well as your interest in the Special Olympics, and, above all, the trip you took us on into Kosovo. I think that was a day very worth while.

We are delighted to have you back and look forward to seeing you again, General.

ADDITIONAL COMMITTEE QUESTIONS

For those of you who do not know, he is a constituent of mine. So I will see you at home, too, Joe. Thank you very much.

General RALSTON. Yes, sir. Thank you, Mr. Chairman.

Senator STEVENS. Thank you.

[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 DANIEL K. INOUYE

CONFLICT IN MACEDONIA

Question. General Ralston, according to press reports, Russian President Vladimir Putin says the situation in Kosovo and the region is spiraling out of control and the Prime Minister of Macedonia says NATO is permitting the creation of a new Taliban in Europe. We are told that NATO countries will be sending more troops to the border between Macedonia and Kosovo. What response do you have to the Russian and Macedonian comments and what will be the mission of the U.S. troops on the border and in Macedonia, peacekeeping, peace enforcement, or combat operations?

Answer. I do not agree with President Putin when he describes "Kosovo and the region" as out of control. KFOR has conducted a peaceful transition in the Ground Safety Zone where Yugoslav forces are now patrolling in the southern section of the Presevo Valley. KFOR has increased the number of patrols along the FYROM border and has interdicted several "Ethnic Albanian Armed Groups" (EAAG) attempting to either enter FYROM from Kosovo or vice versa. KFOR has been very successful in recovering arms caches in the region as well. In concert with KFOR, the FYROM army has been successful in defeating the EAAG in the northern portions of FYROM. Though difficult to eliminate, FYROM has slowly ensured that the EAAG activity, under the reported guidance of the "National Liberation Army" (NLA), is not provided easy access to the area.

When PM Georgievski addressed FYROM on March 18, he did accuse "foreign democracies from Europe of creating new Talibans." However, this was an emotionally charged timeframe. Through State Dept channels, the PM was assured of Western, and specifically United States, support for his government. Subsequently both Secretary of State Powell and President Bush have sent personal notes to the government of FYROM reassuring them of U.S. support for their democratic efforts and fight against the insurgents. More recent events have provided indications that the PM sincerely appreciates NATO/U.S. support.

NATO has requested additional troop contributions for Kosovo. Several countries have volunteered additional troops but this does not change the KFOR peacekeeping mission. The United States has not volunteered additional troops, though Secretary of State Powell has acknowledged military equipment to support the FYROM army may be offered.

EUROPEAN SECURITY AND DEFENSE IDENTITY

Question. General Ralston, does the current debate on pulling our forces out of the Balkans hamper your efforts to influence the EU's EDSI?

Answer. As you know we have assured our NATO Allies that we will not unilaterally withdraw our forces from the Balkans—we will consult fully with our friends and allies. If we did unilaterally withdraw our forces this would play into the hands of those who wish the United States to play a lesser role in NATO and in European security, and consequently it would adversely impact our efforts to build a constructive relationship between NATO and the EU.

Question. General, if the Europeans start down this path, are you concerned they will be forced to spend their limited defense dollars to duplicate capability that NATO already has such as strategic lift?

Answer. I continue to stress with our European Allies the requirement for increased capabilities while not wasting scarce defense resources on capabilities we have in NATO and that we cannot afford to duplicate, such as military command structures and our planning staff at SHAPE. However, this does not mean that we

don't want the Europeans to procure more defense capability. The NATO Defense Capabilities Initiative provides a wide range of capabilities that our allies should strive to attain.

SUBCOMMITTEE RECESS

Senator STEVENS. If there is nothing further, the subcommittee will stand in recess.

[Whereupon, at 11:35 a.m., Wednesday, March 21, the subcommittee was recessed, to reconvene subject to the call of the Chair.]

DEPARTMENT OF DEFENSE APPROPRIATIONS FOR FISCAL YEAR 2002

WEDNESDAY, MARCH 28, 2001

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

The subcommittee met at 10:23 a.m., in room SD–192, Dirksen Senate Office Building, Hon. Ted Stevens (chairman) presiding.

Present: Senators Stevens, Bond, Shelby, and Inouye.

DEPARTMENT OF DEFENSE

U.S. PACIFIC COMMAND

STATEMENT OF ADMIRAL DENNIS C. BLAIR, U.S. NAVY, COMMANDER IN CHIEF

OPENING STATEMENT OF SENATOR TED STEVENS

Senator STEVENS. Admiral Blair, it is nice to have you with us again. I apologize for my tardiness due to a vote on the floor and some conferences that took place immediately afterwards. Delighted to have you as the Commander in Chief of our Pacific forces with us today.

Many of us here have recognized for a long time the strategic importance of the Pacific and the area that is under your command. I think I speak for all of us here that it is our belief that the theater of U.S. military operations for the future must accent the Pacific region. We have not had this vision shared totally throughout the defense establishment, but I am encouraged, I hope my colleagues are, by the reports that there is an increasing awareness of the importance of the Pacific and that the strategic review now under way may give greater emphasis to the area of our great concern and your current responsibility.

As a matter of fact, this coming year may really be a year of transition as far as the position of our national government with regard to the Pacific region. You know more than we do about the specifics of the reasons for these fundamental changes in force structure, engagement, basing, presence of our forces throughout the area. They will have serious impacts on some of our long-range commitments and security relationships in the Pacific, and we will be hopeful that you can provide us with an update on those arrangements and the security situation in the Asian Pacific region as a result of your own review.

I assume that we all have to wait for the final review on the direction that is going on in the Department by Secretary Rumsfeld. But clearly we would like to hear today from you about the basic positions that you are prepared to argue for in your command.

We are going to have some statements that we would like to ask you, and there will be other statements that we would like to file and ask that you and your staff complete them for the record. Your full statement is in the record under our procedure, printed in full, and we would appreciate your comments on how much of that you wish to proceed with orally here.

Let me again personally thank you for your hospitality to us and to the members of this committee when we visited your headquarters in Hawaii, and have been really in touch with you and your subordinates throughout your region. You have the largest regional responsibility of anyone below the Chairman of the Joint Chiefs, and you are in fact Commander in Chief (CINC) of that region.

The CINC concept is one concept that we fully support and we are delighted that you have that position, because of your awareness of the problems and the comments and presentations that you have made to us in the past.

I would yield now to my distinguished colleague. I have called him vice chairman for years, but he is a co-chairman now. Senator Inouye.

STATEMENT OF SENATOR DANIEL K. INOUYE

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

I do not think I can add much more to what you said because you have spoken for the majority of us here. I would just like to add a few things. There are certain statistics that not all of our colleagues may be aware of, such as there are more jumbo jets flying across the Pacific than the Atlantic, we do more trade with Asia than we do with Europe, and from the military standpoint, eight out of the ten largest armies in the world are in your area of responsibility.

There are many places of contention in your region: Indonesia, the Korean peninsula, India, Pakistan, just to name a few. For that reason, I am pleased that we are beginning to hear that the new administration is beginning to think about the Pacific. That is the report we are receiving from the Pentagon. We hope that the strategic review will bear this out and recommend whatever is necessary.

We are eagerly waiting, as the chairman has indicated, the conclusion of this review. But we are well aware, as we are constantly reminded, that unfortunate accidents, disciplinary problems, cultural differences, have occasionally caused us problems with our friends in the region. We are also faced with nations that possess profoundly different forms of government than our own, who seek to challenge our principles of freedom and democracy.

We see areas of significant regional tensions, where territorial disputes threaten the peace of that region. Therefore, I cannot say this often enough, your leadership is so important. You have helped us work through many difficulties, and we have been able to overcome many challenges.

Today, I believe as a result of your leadership, we are respected by our friends and potential adversaries alike. But I am certain you know that improvements are always needed. You can be certain that we stand here ready to serve you and to assist you in your endeavors out there, because we value your leadership.

So, like my chairman, I look forward to your testimony. Welcome, sir.

Senator STEVENS. Senator Shelby.

STATEMENT OF SENATOR RICHARD C. SHELBY

Senator SHELBY. Thank you.

Admiral, we welcome you here and look forward to seeing you in a week or so. I hope you will touch on this in your testimony, but there have been a number of accidents and embarrassments for the U.S. armed forces in the preceding 6 months. Four of these incidents have occurred in your area of operations. These include, among other things: October 2000, overflight of the carrier *Kitty Hawk* by Russian fighters in the Sea of Japan. The carrier launched no aircraft despite ample warning.

Two, November 2000, crash of two Air Force F–16's in the Sea of Japan.

Three, March 2001, the collision that we know about between the U.S.S. *Greenville* and a Japanese fishing vessel.

Four, March 2001, the crash of two Army Blackhawk helicopters in Hawaii.

I guess what I hope you will touch on is—are the troops adequately trained and equipped at this time? Are they ready, so to speak? Do you have adequate airlift and sealift assets to expeditiously transport your combat forces to a conflict and engage with them in a decisive manner?

There are other questions I will ask, but I thought I might tell you at the beginning, and I hope you will touch on these. Thank you.

Thank you, Senator.

Senator STEVENS. Thank you very much, Senator Shelby. I did not detail those because we presume the Admiral is going to deal with those, and some of the questions we will submit will deal with those issues, too.

Senator SHELBY. Absolutely.

PREPARED STATEMENT OF SENATOR THAD COCHRAN

Senator STEVENS. Senator Cochran has submitted a statement and asked that it be placed in the record.

[The statement follows:]

PREPARED STATEMENT OF SENATOR THAD COCHRAN

Mr. Chairman, I am pleased to extend my thanks to Admiral Blair for his many years of dedicated service to our country and for the outstanding job he and his command are doing in support of our national security interests.

The Pacific Command encompasses over 52 percent of the earth's surface and plays a vital role in maintaining peace and prosperity in the region. However, I understand that many challenges and threats exist to maintaining an environment supportive of our national interests and goals.

The proliferation of missiles and other weapons of mass destruction, increased nationalism, and dynamics of asymmetric warfare are three significant threats that will have to be dealt with as we contribute to the stability of this region.

I am concerned that the current rate of ship production will leave your command short of the forces required to carry out future missions. Other concerns that I hope you will discuss today include whether the Pacific Command has adequate flight hours, ship steaming days, spare parts, and ordnance to meet its mission requirements.

Senator STEVENS. Admiral Blair.

OPENING STATEMENT

Admiral BLAIR. Thank you, Mr. Chairman. Let me just make a couple of remarks as we head into the questioning period. First, it would be wrong if I did not recognize this committee for the strong support they have made to the men and women of the Pacific Command this year and in past years. As I look up at both the members in front and the staff members who back you up, I cannot think of a better group who is more knowledgeable about the Pacific. You come out to see us a lot. You know what is going on, and then you reflect it in the bills that you pass.

The priorities that we have in the Pacific Command remain readiness, regional engagement, transformation, and resources. Readiness over the past year has been a mixed picture, frankly. We have made some gains, but there are other areas that we have not made gains in. I am concerned that in the future we will be losing overall readiness unless we can come to grips with some of the structural issues having to do with the operation and maintenance of equipment and of the replacement and maintenance of real property.

On regional engagement, I just returned last week from a trip to China, Korea, and Japan. With our forward-based forces, our forward-deployed forces, we can reassure our friends. We can give pause to those who wish us ill. We are making progress on enhanced regional cooperation, which is tieing together countries to work together on the missions of the future which we all share in common, not simply looking to the missions of the past.

Third is transformation. We are working with Joint Forces Command and we are experimenting our way into the future in the Pacific using our existing exercise program plus some activities like advance concept technology demonstrations. We are working on a concept for the future called the Joint Mission Force, which will be applicable to Pacific missions.

Finally, resources. Our strategy in the Asia Pacific region, no matter how we finally determine it with this administration, is based on balanced, forward, ready forces, a command and control infrastructure which can enable us to work across this vast region that we have, and a mobility network—and you mentioned this, Senator Shelby—to be able to reinforce in crisis or conflict immediately.

To do that, we need sustained funding, for both of our joint headquarters and the four service components who make up the forces in the theater. It is important that we do that for all the reasons we talked about, in this theater that is not only important to U.S. interests, but it is the most dynamic region in the world. It is going to be different in 10 or 15 years from the way it looks now.

USPACOM MILITARY INCIDENTS

Let me stop there with summary statements. But Senator Shelby, I will just address the incidents that you raised. I have looked at the preliminary reports for all of those incidents and I have also looked at our overall statistics, and I do not connect those dots into a trend yet, Senator. For example, one of the pilots involved in the F–16 accident was a group commander, one of the most experienced pilots we have. One of the pilots of one of the helicopters was our most experienced warrant officer helicopter pilot. So it was not that we were putting rookies behind the stick without enough training.

In all of those four cases, there were a series of things that were not done as we know how to do them and so they occurred. But I do not string them together into an overall lack of readiness in those areas. I do remain concerned for the future, as I mentioned, sir.

AIR AND SEALIFT IMPROVEMENTS

Air and sealift, we need improvements in the region because of its distance, because of the number of things we have to cover. I think that the improvements that are still being made in terms of more C–17's coming on line, the more flexible use of the sealift, are in the right direction, and we need those.

[The statement follows:]

PREPARED STATEMENT OF ADMIRAL DENNIS C. BLAIR

INTRODUCTION

Mr. Chairman and members of the Committee: On behalf of the men and women of the United States Pacific Command, thank you for this opportunity to present my perspective on security in the Asia-Pacific region.

Having served as Commander in Chief, United States Pacific Command (USCINCPAC) for over two years, I continue to believe, as we enter into this century, that a secure, peaceful and prosperous Asia-Pacific region is very much in the interests of America, and the world. Alternatively, an uncertain Asia may present only crises and dangers. We base our power and influence on our values, our economic vibrancy, our desire to be a partner in this critical region, and the forward-stationed and forward-deployed forces of the U.S. Pacific Command (USPACOM).

DEVELOPMENTS IN THE ASIA-PACIFIC REGION

Since I last testified before you, developments in the region have offered promise and continuing challenges.

Japan

Japan remains our most important ally in the Asia-Pacific. Although the economy is virtually stagnant, Japan remains the second largest economy in the world and continues to have a strong economic impact on the Asia-Pacific region. Japan hosts nearly 41,000 U.S. armed forces personnel and serves as a forward-deployed site for about 14,000 additional U.S. naval personnel. Japan also contributes $4.86 billion in host-nation support, the most of any U.S. ally. These forward-stationed and forward-deployed forces are key for the United States to meet commitments and defend American interests throughout the Asia-Pacific region. The U.S.-Japan alliance is the cornerstone of U.S. security interests in Asia, and it is fundamental to regional security and peaceful development.

Over the past year, we made steady progress in strengthening our alliance with Japan. The two countries signed a new 5-year Special Measures Agreement (SMA) that will take effect on April 1, 2001. While the utilities cost-sharing levels are down slightly from the previous SMA, the new agreement provides for the same levels of labor cost-sharing and training relocation costs as those of the previous SMA.

Over the past year, working groups took the first steps to implement the Defense Guidelines. In addition, Japan's Diet passed the final piece of Defense Guidelines related legislation: a law authorizing the Japanese Self-Defense Forces (JSDF) to conduct ship inspections to enforce U.N. sanctions. Now that a site for the replacement facility for Marine Corps Air Station Futenma has been selected in northern Okinawa, detailed discussions have begun over the type and scale of the facility. U.S. and Japan ballistic missile defense cooperation continued on Navy Theater Wide research.

On February 9, 2001, USS GREENVILLE collided with the fishing vessel Ehime Maru, resulting in the loss of the ship and nine lives, including students. The U.S. Government and Navy have apologized to the Government of Japan and the families of the victims, are evaluating the feasibility of raising the vessel, and will provide compensation to the victims. The Navy has convened a Court of Inquiry to examine the events contributing to the incident and accountability. The U.S. and Japan have a strong bilateral relationship whose enduring strength has benefited both sides for close to half a century. We believe we will be able to move forward from this tragedy in the interests of both nations and our peoples.

The roles and capabilities of the JSDF are slowly evolving to meet future challenges. The Japanese Ground Self-Defense Force provided a 45-man transportation unit as part of the Golan Heights U.N. Disengagement Observer Force. The JSDF has also worked closely with USPACOM components to restructure bilateral exercises to develop skills for humanitarian assistance, search-and-rescue, non-combatant evacuation, consequence management for chemical, biological and nuclear incidents, and complex contingency operations that are likely to occur in the future. JSDF is sending observers to TEAM CHALLENGE, a linked series of exercises addressing these missions and involving several Asia-Pacific nations. I am also encouraged by the increased attention that the JSDF is giving to cooperating with regional armed forces—the Republic of Korea in particular.

I remain deeply concerned about the Shinkampo private industrial waste incinerator abutting Naval Air Facility Atsugi. While dioxin levels have fallen significantly since Shinkampo completed the installation of bag house filters last May, construction has not started on a 100-meter smokestack that the Prime Minister of Japan committed to building by March 2001. This situation continues to be a serious health risk to our service members and their families.

We must solve individual local issues arising from our forces based in Japan. As important, however, is that the U.S. Pacific Command and the JSDF maintain the capability to defend Japan and build the capability to operate together in order to face the common regional challenges of the future—peace operations, noncombatant evacuation operations, humanitarian relief and dealing with transnational concerns. The Defense Guidelines show the way to the future for the U.S.-Japanese alliance and we must proceed in that direction.

South and North Korea

Last year, the U.S. and Republic of Korea (ROK) began the commemoration of the 50th anniversary of the Korean War. About 37,000 U.S. troops remain stationed in the ROK to deter North Korean aggression.

Political developments in Korea have been breathtaking, highlighted by the June 2000 summit between President Kim Dae-jung and his North Korean counterpart Kim Jong-il. Other North-South reconciliation activities included reunions between selected families separated by the war, increased aid, and agreements to increase economic links including a road and railway passing through the demilitarized zone.

At the same time, North Korea's military training cycle in the winter and summer of 2000 was the most extensive ever, and the ongoing winter training cycle remains robust. North Korea continues to maintain 60 percent of its forces within 100km of the DMZ.

Given North Korea's continuing significant military capabilities, the Republic of Korea and the United States must maintain the deterrent power of the Combined Forces Command (CFC). Any changes to the CFC posture must come through mutual and verifiable confidence-building measures that increase warning times for aggression.

I remain concerned about the lack of frequency clearances granted by the ROK government to U.S. forces for planning and training. For example, there are no frequencies cleared to support UAV training on the peninsula. Likewise, we are currently limited to only 126 VHF/FM frequencies for planning purposes, far short of the over 1,000 frequencies we would expect in an operational scenario. We will continue to work to resolve this deficiency.

Whatever the future holds, it remains in the interests of both the Republic of Korea and the United States to have a continued U.S. forward presence on the Ko-

rean Peninsula. Recent developments have been encouraging. The recent renewal of our Status of Forces Agreement (SOFA), the conclusion of the No Gun Ri investigation, and the agreement on missile guidelines reflect the mature relationship between the United States and South Korea and provide a strong foundation for future cooperation on the Korean Peninsula. The Commander in Chief of U.S. Forces Korea has also proposed a Land Partnership Plan that, once enacted by Korea, will make U.S. force presence less burdensome while enhancing training and combined warfighting capability. We also will begin negotiations for a new Special Measures Agreement that we hope would increase South Korea's financial support for the stationing of U.S. troops in the country.

The Republic of Korea increasingly contributes to meeting regional security challenges by contributing 419 troops to peacekeeping in East Timor, consulting and cooperating with the JSDF, participating in exercises such as RIMPAC (a major, multilateral naval exercise) and PACIFIC REACH (a submarine rescue exercise also involving naval forces from Japan, Singapore and the United States), and participating as observers in TEAM CHALLENGE.

China

During the past year, military developments in China have been mixed. A White Paper issued in February 2000 emphasized China's commitment to peacefully resolving its differences with Taiwan, but also specified conditions that could trigger the use of force against Taiwan. Chinese military spending increased, and Beijing continued to acquire advanced weapon systems from Russia.

The People's Liberation Army (PLA) is modernizing and making organizational changes in all branches of service to strengthen homeland defense, expand regional influence and support sovereignty claims to Taiwan and the South China Sea. China continues to increase its modern combat aircraft inventory and improve air defenses, particularly across the Taiwan Strait. The PLA navy conducted sea trials for eventually fielding additional surface ships and submarines, continued testing of anti-ship missiles, and received its second modern Russian guided missile destroyer. PLA ground forces continued downsizing to reduce force structure and increase mobility. The PLA missile force continued testing and fielding of newer inter-continental and short-range ballistic missiles (SRBM) and is building additional SRBM launch sites within range of Taiwan. China's exercise program, while extensive, was not explicitly threatening to Taiwan.

Over the past year, we have reinitiated military relations with China on a realistic foundation. We have fashioned policies that offer China areas for productive relations, while ensuring that we can deal with a more confrontational posture, should it be necessary. We emphasize areas of mutual interest and encourage Chinese participation in regional security cooperation while maintaining that diplomacy, not armed force, should settle disputes.

We have exchanged visits between senior PLA delegations and U.S. counterparts, and ships have conducted reciprocal port visits. PLA forces participated in a search-and-rescue exercise in the Special Administrative Region of Hong Kong, and four Chinese officials (two from the PLA and two from the Ministry of Foreign Affairs) attended the Asia-Pacific Center for Security Studies in Honolulu. We have invited the PLA to participate in more multinational conferences on topics involving regional security cooperation than it has chosen to attend. We carefully vet our engagement in accordance with the National Defense Authorization Act.

The Taiwan armed forces also continue their restructuring and force modernization. A civilian Defense Minister now oversees the armed forces. The Taiwan military relies heavily on the United States to modernize its forces. Through last year's arms sales, Taiwan's armed forces increased surveillance capabilities and modernized air-to-air, air-to-ground and air-to-surface weapons. Taiwan is looking forward in its modernization plans by improving a number of bases and infrastructure to support acquisition of future weapons.

As Taiwan modernizes its armed forces to ensure a sufficient defense, training, inter-service interoperability and logistics support become even more important. The Taiwan armed forces will have to put resources and attention into these areas to retain the qualitative edge.

Based upon our assessments, I conclude that the changes in PLA and Taiwan military forces have not significantly altered the balance of power across the Taiwan Strait. Taiwan's military maintains a qualitative edge over the PLA, and the PLA still lacks the capability to invade and hold Taiwan. China maintains a quantitative edge in all branches of service, but does not have adequate power projection to quickly overcome Taiwan's more modern air force and inherent geographical advantages, which favor defense. Beijing's military forces, however, have the ability to inflict significant damage to Taiwan.

We expect China to accelerate military modernization, but pressing economic and social issues will temper this effort. Military modernization will not decisively alter the military situation across the Strait in the next several years. The continuing buildup of Chinese Ballistic missiles, combined with increases in accuracy, will increasingly pressure the sufficiency of Taiwan's defenses. The U.S.-China-Taiwan relationship will continue to be a critical factor in our regional engagement strategy.

India

U.S. military relations with India have been restricted since India's nuclear weapons tests in 1998. Areas for military cooperation exist, however. Peacekeeping is the most promising. We have also agreed to discuss search-and-rescue, humanitarian assistance, and environmental security. The U.S. and India have also set up a working group to address counter-terrorism cooperation. The response to India's recent earthquake demonstrated the value of cooperation, both civilian and military. We are pursuing opportunities to build a foundation for closer relations. I believe a gradual strengthening of military interaction is in the interests of both countries. The more we work with India and Pakistan, the better we can defuse tensions by supporting productive relations between those two nuclear-armed countries.

Insurgents and Communal Violence

Beyond Kashmir, which remains a flash point of tension between India and Pakistan, insurgents and communal violence affect many states in the Asia-Pacific Region.

Indonesia faces violent separatist movements in Aceh and Irian Jaya (West Papua) and sectarian violence in the Maluku Islands and Kalimantan. Intense fighting on the Jaffna Peninsula between the Tamil Tigers and Sri Lankan armed forces continues without significant gains by either side. Nepal faces an increasingly troublesome Maoist insurgency. For much of the year, the Philippine armed forces have battled the Moro Islamic Liberation Front (MILF) and operated against hostage takers, including the Abu Sayyaf, which took American Jeffrey Schilling hostage. Indonesia, Sri Lanka, Nepal, and the Philippines are still searching for the right combination of political, economic development, and military/police measures to effectively address these insurgencies and sectarian strife.

In Fiji, a coup overthrew the democratically elected government, and the Solomon Islands have experienced separatist violence that caused a change in government and the evacuation of foreign nationals. Also, fighting among various ethnic groups on Burma's borders, much of it connected to illegal drug trafficking, has spilled into Thailand.

Communal violence not only causes suffering and slows the political, social and economic development of countries in the region; violence also fosters terrorism, causes refugees to migrate, and creates humanitarian disasters that spill across national borders.

Indonesia

Indonesia is still undergoing major political, social and economic changes after 40 years of authoritarian rule.

The Armed Forces of Indonesia, or TNI, began reforms in 1999 that they have yet to complete. The reforms call for the TNI to become a professional, modern armed force, focused on external defense and divorced from political practices. The number of TNI seats in parliament has been reduced and the police force separated from the TNI. However, elements of the TNI have been reluctant to continue reforms. The TNI remains a major political force, particularly on the local level, and retains the major role in internal security. It has not brought under control the militias in West Timor, resulting in the deaths of three U.N. workers and a continuing security threat to East Timor, nor has it yet brought to justice any of those who orchestrated or engaged on atrocities in East or West Timor. TNI reform is an important aspect of restoring order in Indonesia in a manner that promotes democratic development and regional security.

Most interactions between U.S. and Indonesian armed forces have been suspended until there is credible progress toward accountability for East Timor human rights abuses and the return or resettlement of refugees. During the past year, limited interaction with the TNI involved a Navy humanitarian exercise and Indonesian Air Force observers at Exercise COBRA GOLD. The objectives of interaction with the TNI are to favor reform and build capability for coalition operations.

Under the protection of International peacekeepers, East Timor today is generally secure from the militias, but the work has just begun to establish a fully functioning society. Our Australian allies did a great job in leading this U.N.—mandated peace operation and remain the backbone of the security forces. The Philippines and Thailand have stepped forward to assume leadership of the peacekeeping forces since it

became a U.N. operation. The U.S. armed forces continue to conduct operations in East Timor by providing liaison officers, engineers and humanitarian assistance during ship visits.

Philippines

The Philippines experienced a peaceful transition of power from former President Estrada to former Vice President Gloria Macapagal-Arroyo (GMA). Throughout the period of the impeachment hearings and transfer of authority, the Armed Forces of the Philippines (AFP) acted with restraint and used constitutional precepts as guiding principles.

Following the ratification of the Visiting Forces Agreement (VFA) in May 1999, the frequency and quality of interactions between U.S. and Philippine armed forces has also improved. The AFP has actively participated in initiatives to enhance regional cooperation and promote regional security. It deserves credit for taking a leading and responsible role in East Timor, contributing ground forces to the International Force in East Timor (INTERFET) coalition, providing the first force commander for the peacekeeping force of the U.N. Transition Authority for East Timor (UNTAET).

The United States maintains its Mutual Defense Treaty with the Philippines, and our defense relations have steadily improved over the past year. The Defense Experts Exchange, a consultative group established between OSD and the Philippines Department of National Defense in 1999, has made progress in identifying the Philippines' national security and force structure needs. The talks address ways to help the Philippines increase readiness and become a more active contributor to regional security. Operations with, and assistance from, the United States cannot substitute for adequately funded armed forces, and the Philippines has not yet made the necessary investments.

The Philippines continues to face significant internal security challenges from organizations such as the MILF, the Communist New People's Army (NPA) and the Abu Sayyaf Group. This past year, the United States initiated a $2 million program using Nonproliferation, Antiterrorism, Demining and Related (NADR) Program funds to train and equip a counter-terrorist unit that will improve the AFP's capability to deal with hostage taking and other terrorist incidents.

Thailand

A strategic ally, strongly oriented to U.S. military training and equipment, Thailand aspires to adopt force modernization and "jointness" along U.S. models. Thailand consistently responds positively to U.S. requests for access, training, and transit. Thailand is one of the nations in Asia most committed to building regional approaches to future challenges—peacekeeping, humanitarian assistance, and transnational concerns. Exercise COBRA GOLD in Thailand is developing into a multilateral training event to improve participating countries' capabilities to cooperate in peacekeeping and humanitarian missions.

Thailand has taken a leading Southeast Asian regional role in support of peacekeeping by maintaining battalion strength forces in East Timor. The current military commander in East Timor is Thai LTG Boonsrang Niumpradit. We support humanitarian demining in Thailand and will transfer that program over to Thailand by fiscal year 2002. Joint Task Force Full Accounting Detachment-1 in Bangkok logistically anchors our POW/MIA recovery efforts throughout Vietnam, Laos and Cambodia.

Within the last year, Thailand has requested U.S. assistance to the Royal Thai Army in combating drug traffic across the Burma-Thai border. U.S. Pacific Command is in the early stages of establishing a modest program of assistance against this common threat. Joint Interagency Task Force West (JIATF–WEST) is the standing task force for all counterdrug (CD) issues in the theater and has the lead to work training, equipment, and organizational coordination initiatives to assist the Thais with their CD mission.

Australia

This year marks the 50th anniversary of the ANZUS treaty, and Australia remains America's closest ally in the Asia-Pacific region. Australian armed forces not only took the lead in East Timor operations, but they remain the largest part of the U.N. security force there. They also evacuated civilians and provided peace monitors in Bougainville and the Solomon Islands. The Australian government has been active in promoting the return of democracy in Fiji and in promoting security and peaceful development throughout the archipelagic states of Southeast Asia and the South Pacific. Australia has also constructively engaged in dialogue with China and North Korea to promote peace in Northeast Asia.

In recognition of our special relationship, we have pursued an agreement to exempt qualified Australian firms from U.S. International Traffic in Arms Regulations controlling unclassified military technology.

Australia recently completed an extensive Australia Defence 2000 White Paper that clearly lays out its future defense requirements. The White Paper achieved broad national support and general bipartisan consensus through a unique consultation process that involved the public and all government agencies. The product is a plan to acquire the skills and equipment Australia will need to succeed across the full range of defense tasks, along with required funding.

Singapore

Completion of the deep draft pier at Changi Naval Base signifies Singapore's contribution and desire for continued U.S. presence in the region. Though not an ally, Singapore is a solid security partner in the Asia-Pacific region, a vocal proponent for U.S. access, and supports and hosts multilateral activities. Singapore hosted PACIFIC REACH, a multi-lateral submarine rescue exercise; participated in COBRA GOLD and in numerous anti-piracy regional conferences; and is planning a regional Mine Counter-Mine exercise in May 2001.

Singapore seeks greater interoperability with the U.S. Armed Forces. It views high technology and advanced hardware as a deterrent and is increasing its cooperation with the U.S. in Joint Experimentation. Singapore participates with the Extension of the Littoral Battlespace Advanced Concept Technology Demonstration (ACTD) and is active in other experiments such as the Joint Mission Force and Asia Pacific Area Network.

POW/MIA Efforts in Southeast Asia

Joint Task Force Full Accounting (JTF–FA) continues to make progress on achieving the fullest possible accounting of Americans unaccounted for as a result of the conflict in Southeast Asia. JTF–FA conducted ten joint field activities (JFAs) in fiscal year 2000—four in Vietnam, five in Laos, and one in Cambodia. During these JFAs, the JTF–FA field teams investigated 219 cases and excavated 44 sites. JTF–FA will continue to maintain its robust pace of operations in fiscal year 2001, with ten JFAs scheduled—four in Vietnam, five in Laos, and one in Cambodia. Each JFA is about 30 days in duration.

In calendar year 2000, 40 sets of remains previously recovered in JTF–FA operations were successfully identified and returned to their loved ones. As of January 31, 2001, Americans unaccounted for total 1,900. In the same period, JTF–FA recovered and repatriated 24 remains we believe to be those of unaccounted-for Americans from Southeast Asia (17 from Vietnam and 7 from Laos).

Achieving the fullest possible accounting of Americans is a U.S. Pacific Command priority, and we will continue to devote the necessary personnel and resources to obtain the answers the POW/MIA families so richly deserve.

U.S. PACIFIC COMMAND PRIORITIES

The challenges to security and peaceful development in the Asia-Pacific region require regional cooperation to address effectively. They include:

—Unresolved wars in Korea, across the Taiwan Strait, and in Kashmir that have flared, on occasion, but have been restrained for over 50 years.
—Conflicting territorial claims such as the Spratly Islands, the Kuril Islands, and the Senkaku Islands.
—Major powers—China, India, and Russia—that seek greater roles in regional security.
—Communal violence driven by separatist movements and historic grievances.
—And transnational concerns—including terrorism, illegal drug trafficking, piracy, and weapons proliferation.

Our objective is an economically prosperous and interdependent region that shares dependable expectations of peaceful change. To achieve this objective, the strategy of the U.S. Pacific Command involves:

—Deterring aggression in Korea;
—Determining the future of Taiwan by peaceful means;
—Encouraging responsible development of growing powers;
—Developing multilateral capabilities to handle complex contingencies and transnational challenges;
—Planning for transition as security challenges evolve;
—And transforming our armed forces to increase their warfighting edge.

The priorities for the U.S. Pacific Command in executing this strategy continue to be readiness, regional engagement, transformation, and resources.

(1) Readiness

During my comments today, I will discuss the status of many programs. I should note, however, that the programs I will discuss, and the associated funding levels may change as a result of the Secretary's strategy review which will guide future decisions on military spending. The Administration will determine final 2002 and outyear funding levels only when the review is complete. I ask that you consider my comments in that light.

U.S. Pacific Command forces must be fully ready to execute any assigned mission. Readiness revolves around people. If we are to recruit and retain the quality personnel that we need, service must be professionally rewarding to the members of our armed forces and must meet their personal and family needs. If we do not meet their basic professional and personal needs, they have many, often more lucrative, alternatives to a life of service to their Nation.

Professionally and personally rewarding service involves confidence that financial compensation is fair, that educational opportunities are available to prepare for a world that values knowledge, and that healthcare is adequate. It also involves the provision and maintenance of suitable housing and facilities in which to live and work. It involves confidence that we fill personnel billets to match the tasking and that we are properly trained to conduct the full spectrum of operations expected of us. It involves having the resources to maintain equipment in a high state of readiness both during and between deployments, and adequate munitions to train and fight. It involves adequately protecting our forces on and off duty.

Pay, Education, and Healthcare.—First, let me thank you for all the positive quality of life initiatives in the Fiscal Year 2001 National Defense Authorization Act (NDAA). The pay raise of 3.7 percent, targeted Pay Table reform for mid-grade noncommissioned officers, Basic Allowance for Housing amendments, partial reimbursement for mandatory pet quarantine fees, impact aid to help civilian schools educate military dependents, and Tuition Assistance up to 100 percent for off-duty education are all outstanding efforts that servicemen and women appreciate. Also, thanks to your support, the performance of DOD schools is second to none, though we need help in funding operating expenses and maintaining infrastructure.

We greatly appreciate the initiatives of the 106th Congress to enhance the TRICARE benefit and its coverage to include our retirees over the age of 65. This is the right thing to do—such Quality of Life enhancements favorably impact recruitment and retention and ultimately force readiness. And yet, challenges remain in establishing consistent, adequate funding of the healthcare benefit in a way that does not compromise other essential programs. We must ensure health services support functions organic to our operating forces, which are not in the Defense Health Program, receive adequate funding and attention within the Service POMs.

Real Property Maintenance.—Real property maintenance (RPM) continues to reveal the combined effects of aging facilities and under funding. The current and accumulating RPM backlog for U.S. Pacific Command components will amount to $7.1 billion over the next five years, assuming no fundamental changes emerge from the Secretary of Defense's ongoing strategy review. Funding intended for facilities repair and maintenance often goes to more immediate operational needs, and the backlog grows. The result is that our camps, posts and stations across the U.S. Pacific Command are shabby and deteriorating. This shortfall in real property maintenance affects readiness, quality of life, retention, and force protection that we can no longer ignore. Our people deserve to live and work in a quality environment.

Housing.—Good top rate housing that meets family housing goals of 2010 remains one of my top quality of life concerns. Projects are underway, ranging from whole barracks renewals at Fort Richardson, Alaska, and Schofield Barracks, Hawaii, to new family housing at Pearl Harbor and Kaneohe Bay, Hawaii. Commander in Chief Pacific Fleet (CINCPACFLT), Pacific Air Forces (PACAF), and Marine Forces Pacific (MARFORPAC) expect to meet the 2010 housing goal if funding continues at current levels for their programs. U.S. Army Pacific (USARPAC) anticipates adequate housing for Hawaii by 2010 if their Residential Community Initiative is successful. However, housing in Alaska and Japan will remain inadequate until substantial MILCON funding is allocated to their revitalization programs. U.S. Forces Korea (USFK) and U.S. Forces Japan (USFJ) also face shortages, forcing service members to live off base in Korea and Japan, often in inadequate housing. Lack of available real estate acquisition for new housing is the biggest obstacle in Japan and Korea. When additional real estate is procured, we will need additional MILCON Housing funding to meet requirements above what Host Nation Funded Construction can provide in Japan and Korea.

Munitions.—Although we are beginning to procure additional munitions, because they have just recently entered full-rate production, or have yet to do so, a number of preferred munitions are available only in limited quantities and do not support

training and operational requirements. Such already limited quantities have been drawn down as a result of expenditures in Kosovo and ongoing consumption in Operation SOUTHERN WATCH and NORTHERN WATCH. Alternative munitions will get the job done, but with greater combat risk and losses. Funding to further increase stock levels of preferred and precision munitions is a top priority.

Force Protection.—Before the terrorist bombing of the USS COLE, U.S. Pacific Command's Force Protection Program had expanded over the last year to include rear-area protection program during increased hostilities and critical infrastructure protection. The COLE bombing resulted in a command-wide, top-to-bottom review of our antiterrorism policies and procedures.

Funding obtained through the Combating Terrorism Readiness Initiative Fund (CBT RIF) has helped with critical emergent requirements, but the U.S. Pacific Command still has $110 million in unfunded requirements. Joint Staff Integrated Vulnerability Assessments (JSIVA) play a significant role in assessing our program and identifying requirements.

Following the COLE bombing, the Command began a full reassessment of vulnerabilities at ports and airfields not under U.S. control. Negotiating force protection memoranda of understanding with foreign countries is an ongoing process to ensure clearly delineated responsibilities.

A major challenge is to prevent increased effort from becoming a bureaucratic drill rather than a routine way of operating. Instructions and checklists help, but they are not enough. Our commanders must think tactically about force protection. On every deployment, every exercise and even at home stations, we must ingrain force protection in the very fabric of our forces. Having said that, terrorists can choose their time and place of attack. That gives them an advantage. As long as we are engaged around the world, there will be further attacks. Our goal is to minimize the impact to our forces.

Staffing, Training, and Operations.—As we exploit information technology and revise our organizations, the character of combatant command headquarters is changing. Increasingly, headquarters staffs perform operational functions that forward forces used to do. As examples, my staff in Hawaii provided many logistics, communications and intelligence support functions for our operations in East Timor that allowed us to keep the number of U.S. personnel in country to a minimum. This further reduced requirements for force protection and living support. Also, PACAF is establishing a Joint Air Operations Center at Hickam Air Force Base. This center will similarly perform many functions of the Joint Forces Air Component Coordinator, reducing the number of personnel that must forward deploy to conduct operations.

As our headquarters staffs become more involved in supporting operations 24 hours a day, 7 days a week, in addition to their administrative functions, we are finding our staffs working harder than before, even as they downsize. We have turned to the Reserve Components for help, and they have done a splendid job. But our shortfalls are growing, and we are just beginning to exploit the capability that information technology gives us to allow forward forces to reach back to staffs.

Increasingly, the measure of staffs to deployed forces is shifting from "tooth to tail" toward "brain to brawn." While the fiscal year 2001 NDAA provides some relief from the fiscal year 1998 and fiscal year 2000 NDAAs, there is still a requirement for OSD designated activities to reduce personnel by 7.5 percent. These additional headquarters cuts will hinder our ability to provide effective management and oversight of command readiness and operations. It will be difficult to execute these reductions in a way that does not impact our operational readiness. In the U.S. Pacific Command our staffs are fully engaged in operations forward.

We are experiencing shortfalls not only in available billets, but also in the funds needed to train, exercise and operate our forces. Particular areas affecting readiness are funding for flight hours, ship depot maintenance, joint exercises, and reserve support.

The funds allocated to component flying hour programs (FHP) are increasing, but not fast enough to cover escalating costs. The rising costs of fuel and spare parts for aging aircraft appear to be driving the escalation. These costs may increase even faster in the years ahead as DOD aircraft and avionics fall further behind commercial standards. The Navy FHP is growing 15 percent annually. PACFLT is facing a $317 million shortfall this fiscal year (fiscal year 2001). This figure includes a MARFORPAC shortfall of $94 million. Both PACFLT and MARFORPAC would exhaust their fiscal year 2001 FHP funding by August without reprogramming funds. USARPAC's and PACAF's programs also have shortfalls. The Services increasingly rely upon supplemental appropriations to avert the consequences of unprogrammed escalation in operations and maintenance program costs.

PACFLT's Ship Depot Maintenance Program continues to be underfunded relative to the full requirement. Growing deferred maintenance backlogs have been kept in check largely through execution year supplemental funding from Congress. This affects battle group inter-deployment training readiness, which continues to decline as training resources are continually sacrificed to maintain deployed readiness. Forces enter training cycles at low state of readiness, fall to lower levels and then "recover" rapidly right before deployment. The resultant "spikes" in our readiness curves could become vulnerabilities if asked to respond to unforeseen contingencies.

The ability of U.S. joint forces to fight in a seamless battle space and to conduct combined operations with our coalition partners will provide the greatest gains in U.S. warfighting capability over the coming decade. Joint training represents 5 percent of the operations tempo (OPTEMPO) of forces assigned to U.S. Pacific Command. Currently, we are well within the congressionally mandated joint exercise man-days reduction directives. Our USPACOM-wide man-day reduction through fiscal year 2000 was 32 percent, 7 percent below the objective of 25 percent. Simultaneously, we have shaped a solid Joint Training Program. This program provides us confidence that our Joint Task Forces (JTFs) are ready to fight. Further fiscal reductions to the Joint Exercise Program put our JTF and joint warfighting readiness at risk. We need full funding of the currently planned minimum exercise program. This includes Service Incremental Funding and the Strategic Lift (STRATLIFT) provided through the Chairman's Exercise Program. Inflation of flying hour costs has increased exponentially over recent years, significantly eroding our STRATLIFT buying power. This impacts us greatly in USPACOM where STRATLIFT is our lifeblood due to our vast area of responsibility (AOR). We need full funding to ensure we get the right forces, to the right place, to exercise with the right joint and coalition partners, so we can indeed remain ready.

Shortfalls also exist in funding designed to employ reserve and National Guard personnel. U.S. Pacific Command's reserve billets are based upon a single major theater war. Reservists' two week training period is sufficient for them to support one major exercise per year, which leaves the command short of personnel to support several other major exercises in the joint training plan. Defense plans include provisions for Reserve personnel to volunteer to support exercises, but funds are inadequate to accommodate the volunteers.

Summary.—Overall, the majority of readiness concerns of a year ago remain today. While making progress in some areas, we are declining in others. I continue to have no reservations about the U.S. Pacific Command's ability to do its job today. However, I do have doubts about its ability to do so in the future unless we make more progress in addressing structural readiness issues.

(2) Regional Engagement

While readiness prepares us to respond, through regional engagement we shape the region to promote security and peaceful development. Current circumstances provide the opportunity and the necessity to develop more mature security arrangements among the nations of the region. Opportunities derive from dynamic regional security developments and a new generation of leaders willing to reexamine what policies are genuinely in their national interest. Necessity derives from strong nationalism, ethnic and religious rivalry, and historic grievances that drive desires to settle old scores prevalent throughout the region. Steady and focused efforts ensure the region develops in ways favorable to American interests.

Engagement is a process to achieve national objectives, not an end in itself. Our efforts improves the ability of regional partners to defend themselves, deters potential aggressors, strengthens security alliances and partnerships, increases regional readiness for combined operations, promotes access for American forces to facilities in the region, and promotes security arrangements better suited to the challenges of the 21st century.

Enhanced Regional Cooperation.—Over the past year, the U.S. Pacific Command has worked closely with the Joint Staff, Office of the Secretary of Defense and the interagency community to develop enhanced regional cooperation. The objectives of enhancing regional cooperation have been to improve regional readiness for combined operations and to expand the set of states in the region that share dependable expectations of peaceful change.

Transnational concerns affect all states in the region in varying degrees. Many of the states in the region contribute armed forces and police to U.N. peacekeeping operations. Terrorism, weapons proliferation, illegal drug trafficking, illegal migration, piracy, and other transnational criminal activities represent problems that require regional cooperation. Some of this is police work, and some of it is military work. Different countries organize differently. Since adversaries operate freely without regard for borders, seeking support, bases of operation, and weak points to at-

tack throughout our region, the only way to win against them is international cooperation.

By developing capabilities to work effectively as coalitions in complex contingencies (such as East Timor); as partners in countering terrorism, illegal drug trafficking, and piracy; in managing the consequences of chemical, biological or nuclear attacks, natural disasters and accidents; in evacuating citizens caught in the path of violence; in search-and-rescue of mariners in distress; and in providing humanitarian assistance, the armed forces of the region improve their readiness to contribute to combined operations. Working side-by-side on these missions builds confidence and trust among the participants as it improves operational capabilities. It provides a way for states that want to exert more influence in the region to do so in constructive ways that contribute to regional security. And, it provides the United States with competent coalition partners so that our armed forces need not shoulder the entire load.

The U.S. Pacific Command's efforts to enhance regional security include expanding dialogue among the armed forces of the region, developing standard procedures and training staffs to use them, and exercising to hone our capabilities and learn where to improve.

In addition to my visits around the region and those of my component commanders, U.S. Pacific Command sponsors a wide range of activities to promote regional security dialogue. The Asia-Pacific Center for Security Studies (APCSS—see Appendix A) brings together military officers from around the region at the colonel/brigadier level and government officials of equivalent grades for a 12-week course. APCSS also conducts a one-week course for more senior officers and officials, and hosts about five conferences each year. The U.S. Pacific Command also hosts annual conferences on military operational law and logistics, and for the past three years has held a conference for Chiefs of Defense from around the region. These conferences have been very effective in promoting military cooperation against common threats.

At the Chiefs' conference, we also demonstrated our new Asia-Pacific Area Network (APAN). APAN is a non-secure web portal, which provides an internet-based communications and collaboration ability for the armed forces of the region and civilian organizations that participate in complex contingencies to share sensitive, but unclassified, information. On it, we have begun web-based collaboration by posting standard procedures for combined operations. These web pages have mechanisms so that anyone can suggest improvements. Like many things on the web, no government signs up to use these procedures, but they are available for those who need them. Web-based planning and distributed simulations are also possible to add new, affordable means to build regional capacity. Additionally, the APAN concept provides a simple and economical means to provide a networking of institutions and training centers with this new form of collaboration and information exchange. These networks will be the building blocks for Asia-Pacific Security Communities that were previously unaffordable.

We also have held Multinational Planning Augmentation Team (MPAT) conferences to refine procedures, and conducted workshops to train staff officers from around the region as a cadre of Asia-Pacific military planners ready to reinforce a multinational force headquarters. We rely on lessons learned in East Timor and other peacekeeping operations to improve the region's capability to conduct combined operations. In November, the Philippines hosted an MPAT Staff Planning workshop attended by eighteen nations, non-governmental organizations and U.N. representatives. Many armed forces in the region want to improve their abilities to work together, and use APAN to continue their MPAT dialogue between workshops.

TEAM CHALLENGE links bilateral exercises COBRA GOLD with Thailand, BALIKITAN with the Philippines, and TANDEM THRUST with Australia to address bilateral training objectives and to improve the readiness of regional armed forces to contribute to multilateral operations. This year Singapore will participate and other nations, such as Japan and Korea, will observe with an eye toward participating in future years. In TEAM CHALLENGE we will exercise elements from the full spectrum of missions that our combined forces may be called upon to do together, from complex contingencies to humanitarian assistance.

These are examples of efforts to enhance regional security cooperation. As we progress, we find many requirements to coordinate better on logistics, intelligence and other aspects of our operations, and take steps such as developing a coalition-wide area network (successfully employed in RIMPAC, our multinational naval exercise). With cooperation from the nations of the region, and the initiative that my staff and my components have demonstrated, enhanced regional cooperation and security communities have grown from a concept to a substantial approach for promoting security and peaceful development over the past year.

The reactions to the U.S. Pacific Command's efforts have been largely positive, with some reservations. Some allies have expressed concern that multinational efforts will dilute the quality of our bilateral relations. For enhanced regional cooperation to succeed, we must strengthen our traditional bilateral relations, focusing our efforts on capabilities to pursue common interests, and then reach out to other nations in the region. The TEAM CHALLENGE planning efforts have demonstrated our commitment to meeting bilateral training objectives and enhancing them with skills required for coalition operations.

Other nations have expressed concerns that this is a precursor to the United States reducing its involvement in the region. Quite the contrary! By improving our capabilities to work together, the nations of this critical region can more effectively address the broad range of security challenges that none can solve alone.

Also, some nations fear that it is a scheme for containing China. Instead, it is a way to encourage China to contribute to regional security in constructive ways. We welcome the fact that China has sent 15 police officers as part of the CIVPOL contingent to East Timor. We would welcome greater Chinese involvement in peacekeeping such as they provided in Cambodia in 1994. The last class at APCSS included two Peoples Liberation Army (PLA) officers and two officials from the Ministry of Foreign Affairs. They learned that many nations in the region share American security concerns and that cooperation in many areas is in China's interest. The way ahead in U.S. Pacific Command's relations with the PLA is, with the support of other armed forces, to encourage cooperation in areas where our nations genuinely share mutual interests, while maintaining that disputes must be resolved peacefully. As with many nations in the region, we must work to transform PLA leadership mindsets from measuring differences in military power to measuring progress in regional security.

The $10 million in Asia-Pacific Regional Initiative (APRI) funds provided by Congress in fiscal year 2000 and $24.6 million provided in fiscal year 2001 have been essential to the initiatives to enhance regional cooperation. The dollars we invest in these regional activities pay huge dividends in U.S. security.

Currently, U.S. Pacific Command interactions with armed forces of 14 of the 43 nations in the region are restricted in some form. Some of these restrictions are in the U.S. interest. Others, I question. I encourage the close review of restrictions to ensure we have drawn the lines at the right places. The objective is to build relationships and influence for the long term as we exact penalties in the short term.

Foreign Military Officer Education (FMOE).—One area where I would recommend eliminating restrictions is in foreign military officer education. The experience of American officers who have attended foreign military colleges provides an unparalleled understanding of how foreign armed forces see their role and approach operations. Similarly, foreign officers who attend American military colleges develop an understanding of the value of professional armed forces, removed from politics and subordinate to civilian government authority. They come to appreciate that reliance on force to resolve internal disputes, rather than political accommodation and economic development, stokes the fires of rebellion and drives away investments needed for national growth. They also acquire a deeper appreciation of America's interest in maintaining international security so all may prosper. The contacts they develop with Americans and officers from their region establish a network for dialogue and become particularly valuable as they assume leadership roles within their armed forces.

International Military Education and Training (IMET).—We should also examine restrictions on many aspects of our IMET program. Education is a long-term investment and the IMET program, a main source of funding for FMOE, is our primary tool in this effort. I believe unrestricted IMET programs are fundamentally in the national interest. Some say military education is a reward for countries that behave according to international standards. On the contrary, military education is a valuable tool we use to gain influence with foreign militaries. Military training—teaching tactical skills and equipment maintenance—should be carefully tailored and controlled. However, military education—study at Command and Staff Colleges—introduces the ideals of democracy, civilian control of the military, and respect for human rights, and should be available to all. Many reform-minded, pro-U.S. military leaders in the Asia-Pacific region today are IMET graduates who strongly advocate a continued U.S. presence and engagement in Asia.

IMET is a modest, long-term investment to help build a secure, peacefully developing Asia-Pacific region. Following a declining trend, with your help U.S. Pacific Command's funding for IMET is now on the right path. In fiscal year 2000 we received $6.659 million for 17 countries, and in fiscal year 2001 our budget is about $7.2 million for 19 countries. Further increases would yield real benefits to U.S. security.

U.N. Convention on the Law of the Sea.—U.S. ratification of the U.N. Convention on the Law of the Sea (UNCLOS) is another action that would enhance regional security cooperation. Many Asia-Pacific countries assert excessive maritime claims that challenge navigation rights. Over the past few years, parties disputing territory in the South China Sea have shifted their approach from occupying reefs to negotiating over a Code of Conduct. In this and other disputes, the U.S. position is that agreements should be in accordance with UNCLOS. Ratification will strengthen our hand in demanding compliance with UNCLOS requirements and in countering excessive maritime claims.

Summary.—We have continued to make significant progress this year in better structuring our engagement programs in the Asia-Pacific region to advance U.S. interests. Through continued emphasis on education, dialogue, standard procedures, staff training, improved communications, exercises and coordination on matters of common interest, we will continue to expand the set of nations in the Asia-Pacific region that share dependable expectations of peaceful change. We will enhance regional cooperation and access of U.S. forces to facilities in the region, strengthen alliances and security partnerships, and deter aggression.

(3) Transformation

Transformation involves changes in operational concepts and organizational schemes that take advantage of technology to provide decisive advantages in warfare. The Armed Forces of the United States are committed to leading that change in the 21st century. At U.S. Pacific Command, our Transformation strategy is based on two parallel initiatives—technology insertion efforts such as the Advanced Concept Technology Demonstration (ACTD) program run out of OSD and the Joint Experimentation program that is led by U.S. Joint Forces Command.

Since I last spoke with you, U.S. Pacific Command has been rewarded for its aggressive pursuit of ACTDs with three fiscal year 2001 new start ACTDs and a fourth ACTD-like project, bringing the total number of ACTDs we are involved in today to thirteen.

The Tactical Missile Systems-Penetrator ACTD will provide a penetrator weapon designed to deal with specific high threat targets in Korea within three years. The Coalition Theater Logistics ACTD will provide vital logistics command and control capabilities for coalition forces operating in campaigns similar to that in East Timor. The Hunter Standoff Killer Team ACTD will provide vital joint C^4I capabilities to engage time critical targets and massed armor. The Coalition Rear Area Security Operations Command and Control ($CRASOC^2$) is an ACTD-like project in that it will have streamlined management and early operator involvement. $CRASOC^2$ will develop force protection C^4I capabilities to improve coordination between U.S. security forces and host nation police and military agencies for improved protection of our forces stationed overseas.

The Advanced Concept Technology Demonstration program is serving U.S. Pacific Command well. We need such programs designed to get advanced technology rapidly into the field for evaluation and experimentation.

The pace of joint experimentation in the U.S. Pacific Command has increased since I last testified before you. Over the past year, U.S. Pacific Command has supported U.S. Joint Forces Command in the Unified Vision and Millennium Challenge series of experiments and planning conferences. We participated in Joint Warrior Interoperability Demonstration (JWID) 2000 as a primary demonstration site and the Combined Task Force Commander's headquarters in the Pacific Scenario. We have agreed to team, as host CINC, with the Joint Staff and U.S. Marine Corps in the execution of JWID 2002–2003 and have already stepped forward to influence the C^4ISR interoperability challenges that will be addressed. We continue efforts to develop joint interoperability at the tactical level through the Expanding the Littoral Battlespace (ELB) ACTD. With the support of U.S. Joint Forces Command and the Services, we have made significant progress in developing the Joint Mission Force (JMF) concept into a capability.

A Joint Mission Force is a seamless Joint/Combined Pacific Theater response force capable of accomplishing the full spectrum of missions from a complex contingency through humanitarian assistance and of serving as the leading edge of a major war. This force will execute operations more effectively, rapidly and efficiently than we can today. This transformation effort has moved from its infancy into wargames and exercises that enhance our ability to rapidly form and deploy a Joint Task Force. We have identified the top 10 challenges to more effective Joint Task Force operations and have made significant progress in developing procedures to address them. We also have incorporated JMF and other mature experimentation into our exercise program.

We have concentrated our efforts over the past year on the improvements we need to establish a relevant, common operational picture and communicate tasking and information among the headquarters of components of a Joint Task Force. Our JMF Command and Control exercise program, or C^2X, is identifying clear requirements to enable a JTF and assess where specific deficiencies exist, with the intent of fixing deficiencies by 2003. We are receiving strong support from the Services in rectifying these deficiencies that are basic to our joint warfighting capability. The greatest gains in warfighting capability that we will see over the coming decade will come from our ability to eliminate seams in the battlespace and let all units assigned to a Joint Task Force exploit their full potential. We have received significant financial and staff support from U.S. Joint Forces Command in taking the JMF concept from its infancy to a near-term capability. By including our allies and close security partners in our wargames, we ensure that our JMF efforts are in harmony with our other efforts to improve regional readiness for combined operations.

Australia, Japan, Korea, and Singapore all have the technological resources to work with the United States in developing advanced warfare capabilities. We share information on our efforts with these countries, and work together to improve coalition interoperability at the high end of military technology.

Some have expressed concerns that by strengthening coalition capabilities and working with potential adversaries on skills required for peacekeeping operations and complex contingencies, we are jeopardizing our warfighting edge. The reverse is true. We are continuing to widen the gap in warfighting capabilities between the United States, its allies and partners, and potential adversaries. As we experiment, we improve our readiness, enhance regional cooperation, and transform our forces to meet the challenges of the 21st century.

Indeed, U.S. Pacific Command's priorities of readiness, regional engagement, and Transformation are not wholly distinct activities. Let me try to bring this idea alive by describing a visionary Western Pacific deployment of a carrier battle group (CVBG) on its way to the Arabian Gulf.

During workups, the battle group acts as the Navy component of a joint task force under a realistic exercise scenario. The battle group maintains a common operating picture with a JTF commander's headquarters and subordinate Service components. During that time, it experiments with a new C^4 system being developed by the Army—for example a new version of the Coalition Wide Area Network—holding Common Operational Picture checks with brigade headquarters in Australia, Singapore and the Philippines.

—As the battle group approaches Japan, it forms a two-carrier task force, and conducts an area access exercise involving Japanese and ROK forces in both coalition and opposition force roles. The battle group joins the Japanese Global Command and Control System (GCCS).

—It then integrates into the Korean area air defense and conducts experiments integrating joint and combined fires, including live ordnance fire on ranges.

—The task force then transits from Korea down to the South China Sea.

—It exercises operational deception, employing information from national technical means to evaluate effectiveness;

—It conducts Antisubmarine Warfare (ASW) exercises, working the seams between CVBG and area ASW in littoral regions, developing new concepts and establishing C^4SIR requirements.

—It exercises area air and missile defense with an Air Force component out of Okinawa and Guam, working Air Tasking Order improvements and experiments with information operations, and routinely operating with Global Hawk to hone new joint concepts.

—The transit culminates with a dissimilar air engagement exercise with Singapore and port calls in South East Asia. During the port calls, battle group officers hold seminars with counterparts in host countries to improve coalition interoperability at the tactical level.

All of this could be done in 10–14 days. And what would we have accomplished?

—Increased readiness of all forces involved, to respond to contingencies;

—Conducted regional engagement that both reassured allies, and deterred those who would use aggression to impose their will;

—Made progress in transforming the way we operate, both to take advantage of emerging technology and to address emerging challenges.

This vignette illustrates that readiness, regional engagement, and the transformation of our armed forces are not distinct efforts, accomplished by separate organizations at separate times. We do them together, with operational units. If we experiment and adapt, we are increasing our readiness, while we make the evolutionary changes in technology and concepts which will lead to the transformation

of warfighting. If we do them with our allies and security partners, we have the most effective kind of military engagement.

Transforming our armed forces to maintain their leading edge and interoperability with coalition partners is essential to protecting American security interests in the 21st century. Several members of Congress have been active in pushing us to pursue this program, and we need your continued support and leadership.

(4) Resources

The U.S. Pacific Command's ability to execute its strategy rests on its ability to command ready, forward-deployed and forward-stationed forces, to move them where they need to be in the theater, and to reinforce them in the event of a major war. Ultimately this depends on the resources Congress and the American taxpayers provide us. In this section, I will discuss resources in several key areas that are important to the Pacific Command's strategy.

Command, Control, Communications, and Computer Systems (C^4) Capabilities

Information technology is changing every aspect of warfare in an evolutionary way and warfare as a whole in a revolutionary way. From my perspective, C^4 support fits into three main categories: (1) an end-to-end infrastructure; (2) the capability to integrate and process data into usable information and make it available when needed; and (3) the protection of information.

First, the end-to-end enterprise enhances the ability to command and control forces and consists of a space segment, a downlink capability and the ground segment.

The U.S. Pacific Command's vast area of operations, covering 52 percent of the earth's surface, requires forces to rely heavily on strategic satellite communications (SATCOM). Since my testimony to you last year, we've made great strides in many of the SATCOM programs. For example, we accelerated the Advanced Extremely High Frequency program to compensate for a Milstar launch failure; agreed to launch a third Wideband Gapfiller System satellite to complete global coverage as the Defense Satellite Communications System constellation replacement; and scheduled the launches of the three Milstar satellites. The challenge is to keep these critical satellite programs on track.

As I also stated last year, my Joint Task Force commanders and deployed units must have access to the strategic defense information infrastructure, the Global Information Grid, or GIG. This capability is critical to providing them with vital command, control, and intelligence information. I strongly supported the DOD Teleport program, as did many of my fellow CINCs, and I am now satisfied that this program is on course.

Advances in the space segment and downlink capability provide little value if we cannot push the information out to the user. The base, post, camp, and station infrastructures must keep pace. Since we still have antiquated cable plants, network wiring, and end-user equipment, we must attack this ground infrastructure as aggressively as we have the space segment. The recent decision that injected significant funding into the U.S. Army's European and Pacific theaters is a tremendous boost in our fight to keep pace with technology, and I applaud your and OSD's efforts in directing that funding to us. However, requirements go beyond the U.S. Army. The U.S. Air Force, Navy, and Marine Corps are also encountering the same problems and require much-needed funding support if we are to modernize entire theaters. While single-Service efforts significantly help in the modernization battle, we realize maximum payoffs when we collectively raise all Services to the same capability level.

Not to be overlooked in the end-to-end infrastructure is the frequency spectrum. We must proceed cautiously with the sell-off of DOD frequencies since that loss directly translates into potential operational risks. Once we sell them, they are forever unavailable for military use.

The second C^4 category involves converting data into useful information that will optimize synchronous planning and execution, and improve decision support. At the heart of this requirement is interoperability and accessibility. Interoperability allows all parties to share the same capabilities and information, while accessibility allows them to get the information they require when and where they need it.

The Global Command and Control System (GCCS) is the backbone of the joint and combined command and control capability. Yet, Service variants of GCCS are not fully interoperable with the Joint version. For example, the GCCS Integrated Imagery and Intelligence application being developed for the Joint version of GCCS is falling behind, while the Services continue to modernize their individual intelligence applications. To fix this, we must mandate new C^4 systems be Joint 'from cradle to grave.'

There are also GCCS incompatibilities in combined operations; for example, GCCS Joint and GCCS-Korea. These two systems share some common operational picture data, but do not share information via files, e-mail, and other web service tools. Obstacles to combined interoperability lie in information release restrictions. Our allies understandably restrict release of their classified information. Likewise, we want to control release of U.S. classified information. To achieve effective combined interoperability, we must develop much more capable security procedures and sophisticated tools to allow information exchange while protecting our national and allied data.

Technology is changing the way the warfighter prepares, trains, and executes the mission. We must develop a mindset promoting innovation and technology insertion. It is through continued support of Advanced Concept Technology Demonstrations, experimentation programs, and exercises with our coalition partners, that we find ways to improve interoperability and enhance capabilities. We must put more emphasis on acquisition by adaptation, put proven prototypes into a joint field environment, and mature them through a tight spiral development cycle. Information is power, and a fully interoperable infosphere allows us to collaborate with coalition partners, share operational pictures, increase the speed of command, and ultimately, win the day.

Obviously, sharing information among Services, sub-unified commands, and coalition partners is a complex security challenge. That leads me to the third category, Information Assurance (IA). How do we provide access to, and share information with, Asia-Pacific countries while protecting U.S. and coalition-sensitive data from potential adversaries?

To improve IA in the U.S. Pacific Command, we are taking several measures. We are evaluating the Automated Intrusion Detection Environment. Our Theater C^4ISR Coordination Center is building a theater IA common operational picture (COP) (similar to the COP we use in the command and control arena) and tracking intrusion attempts and methods. We also are working closely with the Defense Information Systems Agency on an improved configuration that will provide full coverage of external connections to our Pacific networks.

Yes, we can improve IA in the theater; however, to do so requires a heavy investment in people and additional hardware. The payback is not always as easily recognizable as with the production of new airplanes, ships, or tanks. You cannot touch and feel information protection, but a loss of critical or time-sensitive information or a denial of service can be far more detrimental to national security than a single weapon system. I request your continued support as we implement IA into our daily operations.

As you can see, C^4 is a major concern in the Pacific and my top resource priority. While we have made great strides recently in addressing satellite communications shortfalls, we still have a long way to go. We must now focus on modernizing the ground infrastructures and ensuring the protection of our networks and the information that traverses them.

Intelligence

Intelligence is essential to monitor potential adversary developments and preparations so that we can train our forces for the threats that they face and move them into position in a timely fashion. Shortages of airborne intelligence, surveillance and reconnaissance (ISR) assets—U–2s, RC–135s, EP–3s significantly impact USPACOM's readiness ratings. These shortfalls diminish our situational awareness, early indications and warning (I&W), and deep knowledge of the capabilities, plans and intentions of key theaters in our area of responsibility. Although Joint Staff planned allocation of airborne reconnaissance assets is adequate for routine operations in the Pacific Theater, we do not have the surge capability to monitor crises or cyclical increases of potential adversary activities. Other chronic shortfalls in high priority intelligence include linguists, tactical signals intelligence (SIGINT) systems, intelligence specialists, and intelligence interoperability.

The core of intelligence analysis and dissemination in the theater is the Joint Intelligence Center Pacific (JICPAC), located near Pearl Harbor. JICPAC's operational efficiency and impact suffers because almost 100 JICPAC personnel must work in a revamped hangar at Hickam AFB, due to space limitations in the main JICPAC facility. These split-based operations cost almost $300,000 per year for the separate facility, as well as lost time and efficiency. In addition, JICPAC's building, in a vulnerable location near a major highway, presents a serious force protection issue. At the same time, the Kunia Regional SIGINT Operations Center (RSOC) occupies an aging facility, built in 1945, renovated for cryptologic operations in 1979, and then updated throughout the last twenty years. Collocating the RSOC with the new

JICPAC facility on an intelligence "campus" would improve intelligence exchange, analytical dialogue, and efficiencies in infrastructure.

Advances in global telecommunications technology continue to place enormous pressure on the need to modernize both national and tactical cryptologic capabilities. USPACOM supports the National Security Agency/Central Security Service's (NSA/CSS's) strategic transformation actions and changes undertaken in the last year. NSA must transform to address the global net, but warfighters' knowledge of adversary battlefield communications will also continue to be a high USPACOM priority. NSA must be funded to continue modernizing tactical SIGINT collection capabilities, operations of the RSOC and accompanying land-based collection architecture, addressing ELINT collection shortfalls, and operations of the Information Operations Technology Center (IOTC).

Specifically, NSA needs more capable, joint tactical cryptologic systems. Rapid advances in widely available communication technology have rendered obsolete much of the current inventory of tactical cryptologic systems. At the same time, the Services' R&D funding has declined. NSA and the Services must continue to aggressively pursue standards and common architectures, such as the Joint Tactical SIGINT Architecture.

Increased HUMINT capabilities are critical to support collection against strategic and operational requirements in the Pacific. Improvements are needed to enhance collection against key USPACOM indications and warning requirements and hard-target organizations and countries. Continuing investment in theater-based HUMINT resources, specifically computers and communications capabilities, is essential to improve collection against hard targets. Any further Defense HUMINT Service (DHS) reductions will adversely impact USPACOM-based U.S. Defense Attaché Offices (USDAOs), Field Operating Bases, and DHS support to key USPACOM collection requirements and contingency operations. The USDAO system, in particular, already is experiencing serious resource constraints in the USPACOM AOR.

The Nation's future imagery and geo-spatial architecture will deliver unmatched capability, including enhanced imagery collection provided by unmanned aerial vehicles and the Future Imagery Architecture. However, USPACOM warfighters will not reap the full benefits of this capability without full tasking, processing, exploitation, and dissemination (TPED) investment. A robust TPED architecture is essential to ensure that dynamically tasked national, airborne, and commercial imagery and geo-spatial products connect the sensors to the analysts and, ultimately, to the tactical consumers. Services and agencies must institutionalize the need to properly program resources that incorporate TPED capabilities. Progress is occurring and CINC interests are being addressed. However, we will work to identify outyear funds to meet substantial portions of Senior Warfighting Forum priority requirements. Specifically, the Services must work with National Imagery and Mapping Agency to fund the capabilities needed to make Joint Vision 2010/2020 a reality. These include required technical enhancements to theater digital infrastructure, advanced analytical exploitation tools, and improved imagery analyst training (especially for advanced sensor products).

Asian linguist deficiencies are acute and a documented USPACOM readiness concern. Despite additional student slots at the Defense Language Institute, there are recurring and persistent shortages of Asian linguists to meet Operation Plan (OPLAN) and Contingency Plan (CONPLAN) requirements. Also, resources for low-density linguists in support of probable Noncombatant Evacuation Operations (NEO) continue to be problematic. Service recruiting and retention shortfalls, coupled with the inherent difficulty of Asian languages and the longer training periods required, aggravate these deficiencies.

Mobility Infrastructure and Strategic Lift

With congressional and Service support, we have made solid progress in correcting deficiencies in our mobility infrastructure. A total of 15 MILCON projects are either in work or programmed through fiscal year 2004. We will apply supplemental MILCON funding for fiscal year 2001 to critical en route and currently unfunded infrastructure projects, such as those at Wake Island.

We support the fiscal year 2001 MILCON language that would restore MILCON contingency funding. While we are making headway with some near-term MILCON projects, sustained funding is still required. The continued appropriation of resources is absolutely essential to maintain an upward trend and complete the necessary repairs of our aging mobility infrastructure.

In addition to a well-maintained mobility infrastructure, contingency throughput in our theater largely depends on strategic lift. As identified in the recently released Mobility Requirements Study 2005 (MRS–05), there are "areas where improvements

are needed in mobility programs * * * An airlift fleet of 49.7 million-ton-miles per day, (the previous established level), is not adequate to meet the full range of requirements." I fully support the MRS–05 recommendation that "DOD should develop a program to provide [additional] airlift capacity."

Army Prepositioned Stocks (APS–4)

A key logistics and sustainment shortfall remains in Army Prepositioned Stocks (APS–4) in Korea. Sustainment shortfalls limit ability to reconstitute the force and sustain missions, resulting in increased risk. Major end item shortages include M1A1/A2 tanks, MLRS, HEMTT fuelers, and some chemical defense equipment. Equipment shortages currently total about $450 million. Lack of repair parts and major assemblies within the APS–4 sustainment stockpile will directly impact the ability to return battle-damaged equipment to the fight. The Army's current plans are to cascade additional equipment into the APS–4 sustainment stocks over the next couple of years, thus reducing this shortfall.

Infrastructure in Japan and Korea

The Host Nation Funded Construction (HNFC) programs in Japan and Korea provide almost $1 billion annually in new construction to support U.S. Forces. However, the United States must fund the initial project planning and design (P&D) effort. For fiscal year 2001, the U.S. Army Corps of Engineers allocated $20.5 million for the HNFC program. This is a return on investment of 46:1. Continued congressional support for the planning and design funding is critical.

One provision of the latest Special Measures Agreement is that Japanese Facilities Improvement Program (JFIP) funds can no longer be used for "revenue producing" projects. Examples of projects disallowed in the fiscal year 2001 program were Army and Air Force Exchange Service warehouses, exchanges, commissaries, and gymnasiums. The effect of this provision is that additional MILCON funding will be required for the Services, Defense Logistics Agency, Army and Air Force Exchange Service, Navy Exchange, Defense Commissary Agency, and DOD Schools to support Quality of Life initiatives for our service members in Japan. We will need strong congressional support for these MILCON projects when programmed. There has not been a MILCON project completed in Japan since 1989.

New Headquarters Building

I would like to offer my thanks again for your support for the new U.S. Pacific Command Headquarters building. We held the groundbreaking ceremony in February and are on track to provide a facility designed to support the 21st century.

Security Assistance

Security Assistance Funding in the Pacific Theater is an important component of my Theater Engagement Strategy.

Foreign Military Financing (FMF).—For fiscal year 2001, two U.S. Pacific Command countries will each receive about $2 million in FMF; Mongolia, to increase its border security capabilities; and the Philippines, for critical aircraft and patrol boat spare parts. State Department has allocated FMF for East Timor, as those funds meet legislative requirements.

Enhanced International Peacekeeping Capabilities (EIPC).—The Asia-Pacific region needs better capabilities to respond collectively when the United Nations or the nations of the region determine that an international response is required. Approximately $2.2 million in fiscal year 2001 EIPC funds have been requested for five Pacific Command countries, to either enhance existing or establish new peacekeeping operation (PKO) training centers. These well-spent dollars are helping our neighbors share the PKO burden around the world.

Nonproliferation, Antiterrorism, Demining and Related Program (NADR), and Overseas Humanitarian Disaster and Civic Aid (OHDACA).—NADR funding has helped the Philippines improve its ability to deal with terrorists, and, in combination with DOD OHDACA money, has done much to reduce the threat of unexploded ordnance in Thailand, Cambodia, Laos, and Vietnam. Anticipated fiscal year 2001 funding will expand demining operations in those countries.

These Security Assistance programs, along with IMET, are crucial to our continued engagement in the Asia-Pacific region, and I request your continued support in their funding.

Center of Excellence in Disaster Management and Humanitarian Assistance (COE)

Since its beginning in 1994, the Center of Excellence in Disaster Management and Humanitarian Assistance has bridged the gap between civil and military activities related to humanitarian emergencies. Historically an annual increase to DOD appropriations has funded the COE. Collaborating the resources and strengths of gov-

ernmental and non-governmental organizations, the Center of Excellence has participated in relief efforts following floods in Vietnam and Venezuela, earthquakes in Turkey and Taiwan, and population displacement in Kosovo and East Timor. The Center's approach to response, education and training, research, and consulting for disaster relief has become the model for successful interaction between the military and private humanitarian organizations.

CONCLUSION

In summary, Asia-Pacific issues are growing in importance on the American security agenda. Our people are the foundation for everything that we do, and providing professionally rewarding service must be our first concern. Next must be our strategy, and ensuring that we have the capability to sustain our forward basing, support increasingly information-rich operations, and the mobility to move our forces across this vast theater and across the globe. The coming year will continue to present challenges for the United States in the Asia-Pacific region. We neglect developments in the region at our peril, but with sustained attention we can help build a region which will support American interests over the long term.

APPENDIX A

ASIA-PACIFIC CENTER FOR SECURITY STUDIES

The Asia-Pacific Center for Security Studies (APCSS) is a regional studies, conference, and research center in Honolulu. Established in September 1995 as a preventive defense and confidence-building measure, its mission is to enhance cooperation and build relationships through mutual understanding and study of comprehensive security issues among military and civilian representatives of the United States and other Asia-Pacific nations. The cornerstone of the Center's program is the College of Security Studies, which provides a forum where future military and government civilian leaders from the region can explore pressing security issues at the national policy level within a multilateral setting of mutual respect and transparency to build trust and encourage openness. Central to the College's effectiveness is the relationships forged between participants that bridge cultures and nationalities. Full and unobstructed participation by all nations in the region, to include such countries as Indonesia and Cambodia, is essential to achieving this. Complementing the College is a robust conference and seminar program that brings together current leaders from the region to examine topical regional security concerns, including peacekeeping, arms proliferation and the role of nuclear weapons in the region, and energy and water security.

The Center directly serves to further our regional engagement goals in several ways. First, it serves as a resource for identifying and communicating emerging regional security issues, within the constraints of non-attribution. Secondly, the Center functions as an extremely effective "unofficial" engagement tool to continue critical dialog in cases where official mil-to-mil relations are curtailed. Recent conferences and regional travel involving contact with, or participation by, prominent representatives from China highlight this role. Additionally, the Center frequently coordinates or hosts conferences addressing topical issues of interest to the U.S. Pacific Command or the region. Finally, the Center serves as a forum for articulating U.S. defense policy to representatives from the region. Authorization to waive certain expenses as an incentive for participation, and expanded authority to accept domestic and foreign donations to help defray costs are crucial to the continued success of the Center.

Senator STEVENS. Thank you very much, Admiral.

I came in late, so I am going to turn to Senator Inouye first.

Senator INOUYE. I thank you very much.

Admiral Blair, last year you were quoted as advocating enhanced regional cooperation, multilateral exercises, and dialogue as ways to create consensus among Asian countries on specific security needs. I am certain you are aware that there are those who question the utility of military to military contacts with some countries in your region. Do you have any response to this criticism? More broadly, what is your opinion of engagement as a strategy in dealing with Asia?

MILITARY-TO-MILITARY CONTACTS

Admiral BLAIR. Senator, I am a strong believer in engagement in the Asia Pacific region. It has to be engagement with a purpose, not just activity. In the Asia Pacific region we direct our engagement toward building U.S. influence with the countries in the region, we direct it towards increasing U.S. access, so that when we have to go someplace we have available facilities within countries. Finally, we direct it towards building more competent regional coalition partners so that when an operation like East Timor occurs there are other countries which can share the load with us.

So our program is focused. The human side of it is very important. Let me give you two anecdotes, Senator. It has appeared in the paper that a senior colonel from the People's Liberation Army (PLA) has decided to pursue his career in the United States rather than remaining in China. He is a person who knows more about the United States than most any other senior colonel in the PLA. I think knowledge of our country breeds people who can work with us. In fact, in this particular case, he preferred the United States.

I was visiting another country. I had had a particularly unpleasant meeting with a general in that country, Cold War attitudes would have been an improvement over what he was giving me. As I came back out to my car, my escort officer, who was a graduate of the Asia Pacific Center for Security Studies (APCSS), just leaned over to me briefly. He could not do this publicly——

Senator STEVENS. Admiral, may I interrupt you? Pardon me.

Will those in the back row move forward a little bit, so those people can get behind you and over into these chairs on the other side. Those in the back row, move your chairs forward a little bit so these young people can get behind you.

Thank you, Admiral. Sorry. Go ahead, sir.

ENHANCED MILITARY ENGAGEMENT

Admiral BLAIR. As I was getting in the car, this graduate of APCSS leaned over to me and said: "Admiral, I am sorry about that meeting; there are those of us in this country who know what we need to do." I believe that the reason he knew what he needed to do was because he had spent those 12 weeks at the Asia Pacific Center.

So I believe that engagement, done smart, done right, is very much in the U.S. interest. On that score, I particularly appreciate the Asia Pacific Regional Initiative (APRI) funding, which frankly is an initiative of this committee. Those dollars that you have made available to us we have spent on exactly these kinds of activities, and I believe the results are beginning to show.

Senator INOUYE. Would International Military Education and Training (IMET) also fit into this scheme?

INTERNATIONAL MILITARY EDUCATION AND TRAINING

Admiral BLAIR. Yes, sir. IMET is a big part of that, and I am a big believer that the more IMET the better. I distinguish, Senator, between education and training. There are certainly military officers and noncommissioned officers that we do not want to train to set better ambushes and to be able to lay artillery and to be able

to plan attacks. That is the training piece and we should make that available strictly to people that we know are going to use it for the right purposes.

But when it comes to education, sitting at Carlyle, Pennsylvania, in the Army War College, Montgomery, Alabama, Fort Leavenworth, reading books about what armed forces are all about, I think that we should make that available to virtually every armed force in the region. If I had my way, North Korean officers would be taking that education, because I believe it teaches them. It does not make them into American officers, but when they go back into their countries, number one, they know about this country; number two, they know how a responsible armed force under political control, concentrating on external defense, having in mind concepts like posse comitatus and the things that we are raised with in the armed forces, these kind of officers are the ones who are going to change these countries and the ones who are going to deal with us over the long term.

So the more education in IMET, the better for the United States.

Senator INOUYE. What would you suggest we do to enhance the contribution made by the Asia Pacific Center?

Admiral BLAIR. I think you have got it just about right, Senator. I know you were there when we opened the new building last year. That is making a tremendous difference because the campus-like atmosphere is contributing to even more interchange among the fellows during the course, which is good.

We are gradually increasing the number of graduates, but we need to maintain the quality. Right now we have 500 graduates of that course who are out there. They are talking with each other by Internet email, they have a regional focus. I think the pace that we are doing that is just about right.

We would like the authority in two areas which are not the province of this committee, but are of the authorization committee. That is the ability to receive donations directly from charitable organizations, including foreign charitable organizations, and the second one is permanent legislation authorizing APCSS to waive reimbursement of the costs of attendance at their conferences and courses for attendees from other nations.

They have been placed in appropriations language repeatedly in past years and we would like the permanent authority to do that for this committee. That would be the one single thing that I would ask for, Senator.

Senator INOUYE. I have a rather parochial question. I have been receiving calls and letters suggesting that the 911 systems in certain military bases in Hawaii are not working as intended. Can you comment on this?

ALL CALLS

Admiral BLAIR. I have received those same reports, Senator. I am told we are working on them, and let me get back to you with a more detailed answer on how that is being improved.

[The information follows:]

We currently do not have a seamless 911 system on Oahu. All 911 calls originating from military locations, including family housing, are delayed due to the required manual re-routing of the calls from the civilian/military dispatcher back to

the appropriate military emergency response unit (i.e., fire department, ambulance, military police). The Joint Interservice Regional Support Group (JIRSG) is working on a solution to automate the military interface between the City and County and Department of Defense Emergency Dispatches which will require new equipment, updating the street mapping databases for the on-island military installations (a major effort), and thorough testing. All four Services are engaged in this unfunded Quality of Life issue.

Senator INOUYE. Transformation is a key word in the administration at this time, primarily in the Army, but I presume that all services are going through this exercise. Do you have any thoughts on transformation?

ARMY TRANSFORMATION

Admiral BLAIR. Yes, sir, I do. I believe that the key to transformation is not sitting back in a room making up ideas of what the armed forces will look like in 30 years and then putting it into the current acquisition system. I believe that the key to transformation is getting out there and experimenting and then improving based on what we find in the field.

I visited Fort Lewis about 2 weeks ago and saw the Interim Brigade Combat Team and it is doing just that. Interesting things, like instead of the Army Training and Doctrine Command, a bunch of colonels sitting around writing the manuals, the Army Training and Doctrine Command is writing drafts, sending them to Fort Lewis, and sergeants who are actually driving these vehicles around look at the new documents and say: Nah, this does not work, this does, you forgot about this.

So we are building it through the experience. But we only gain experience from operations or from exercises and creating artificial conditions. I believe that is the way to change.

We are doing the same thing in the Pacific Command with our exercise program by taking part of our exercise and trying to do it differently, and then drawing the lessons from that and plowing it back in. So I am very much a believer in shortening time lines of acquisition, adapting rather than trying to work for a program 50 years in the future, and pushing the responsibility down within the system rather than having it come out of labs and warfare development centers.

I believe that the more that we institutionalize that kind of approach, the faster we will get better.

Senator INOUYE. Admiral, I would like to take this opportunity to commend you and your command in the way you have handled the recent tragic accident involving the *Ehime Maru* and the U.S.S. *Greenville*. I think you have handled this matter sensitively. You have gone out of your way. You have taken the extra step. You do not often hear of a hearing panel consisting of not only our admirals, but the admiral of another country.

I am certain that the Japanese government looks upon this favorably. So if I may, I wish to commend you and your command, sir.

EHIME MARU INCIDENT

Admiral BLAIR. Thank you very much, Senator. If I could point to one—I would like to point to two names who have, I think, handled this just right. One is Admiral Fargo, who is our Pacific fleet

commander; and also I would like to commend Admiral Fallon, our Vice Chief of Naval Operations, who made the trip to Japan to offer formal apologies on behalf of the President and of the Navy.

I have been playing background music, but it is those two admirals who have really done the heavy lifting, and I will pass that on to you, sir—to them, sir.

Senator STEVENS. Senator Shelby.

Senator SHELBY. Thank you.

INTELLIGENCE GATHERING

Admiral Blair, what steps has the Pacific Command under you taken to provide counterterrorism and emerging threat intelligence data in support of forward protection efforts? Are more resources necessary to properly mature these intelligence support efforts? Are you concerned that we may soon face a serious and potentially life-threatening intelligence failure?

In other words, what do you need? There have got to be risks everywhere. Would you comment on that?

Admiral BLAIR. Yes, sir. I cannot do much about the collection side of intelligence. As you know better than I and better than most, to penetrate these terrorist organizations, with their cell-like structure and the pretty tough initiation practices that they have, is difficult. So to count on tactical intelligence for an event, I do not think we can base our plans on that.

So we have primarily taken intelligence action in two areas. One is to consolidate our analytical areas, so that we are not simply passing raw intel to all of our forces and saying, you sift through it. But we have established a tighter analytical cell at our headquarters. There is a new cell at the Defense Intelligence Agency. We are forcing the analytical community to make calls, to tell us what is different, to try to do a systems approach to at least telling what they know and what they do not know.

But I think, more than that, we are not counting on having tactical intelligence every time. We have had pretty strong force protection plans for our fixed installations, but we are now applying that same methodology to our forces that go through and make port visits, airplanes that stop, small units that go for deployments, and we are looking at it from that point of view.

Finally, we are trying to instill a tactical way of thinking about it among our commanders. In the past, I will tell you frankly, we thought of force protection as sort of like getting your shots. If you receive your inoculation, you are going to be okay. If you go through a checklist of items, you are going to be okay. Now we are emphasizing to our commanders that they have to think of terrorists as the enemy. These are individuals who are going to come at you down a certain street, across a certain piece of water, and you have to treat them just the way you would in combat. You have to think of your approaches, you have to have your people armed and ready. You have to make risk management decisions on a tactical basis.

I think this mind change will help us better. You do not have the complete intelligence in combat. As you know, you have to make plans based on not having that. So I think we are increasingly a tougher target, which is important, and we are better able to han-

dle attacks should they come. I cannot sit here and promise to you or to the parents of our service people and their brothers and sisters and spouses 100 percent protection, but I can promise you that it is getting better every day and we do not have easy targets in the armed forces of the United States. But to do our job we have to be out there, and we are not going to have 100 percent protection against determined terrorists who are willing to sacrifice their own lives.

Senator SHELBY. Admiral, could you comment on our ability to disseminate intelligence data in the Pacific theater? Are we properly supporting our forces in Korea? How can we help?

In other words, you have, as we all know, a broad scope of command there. There is a lot of territory.

INTELLIGENCE DISSEMINATION

Admiral BLAIR. That is the one area, Senator, that I feel okay about. We have a system that when a piece of intelligence with time sensitivity and geographic specificity comes in we get it to the troops who it affects. We get it to them at the highest level of classification we can. But if all they have is a telephone, we will call them on the telephone and tell them.

We test that periodically under a test system, and we can get that data out to anybody in minutes. So that is the one piece I feel good about. I just wish we had more to get out to them.

Senator SHELBY. Could you comment briefly on the ballistic missile threats in the Pacific theater, in your operation area?

THEATER MISSILE DEFENSE

Admiral BLAIR. Yes, sir. The greatest threat is over 500 Scud-class missiles that are held by North Korea, and they can target both South Korea, our troops there and our allies there, and they can also target part of Japan. That is the single largest threat we have.

The other missiles that we worry about, because we are pledged to a sufficient defense of Taiwan, is the [deleted] weapons which range Taiwan that are on the Chinese side, and more are being installed all the time. So I am a very strong supporter of theater missile defense, both sea-based and the land-based. We need both in our theater in order to provide force protection for ourselves and to be able to provide it to our allies when we choose to.

As you know, Japan is cooperating with us on some of this missile defense. Korea is not cooperating on the defense, but they are purchasing Patriot missiles, which are point defense, for some of their own platforms. As you know, the Taiwan arms sales are under consideration right now by the administration. So that is pretty much the set.

I would say, Senator, that these weapons, as we learned tragically in the Gulf War when 30 Pennsylvania guardsmen were killed by a Scud that in fact had been hit by a Patriot system, that these are weapons of widescale destruction and terror. These are not war-winning weapons. They are weapons that we can deal with, but we should have better defenses against them.

Senator SHELBY. Thank you, Mr. Chairman.

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

Admiral, my apologies for arriving late. I have been enjoying the benefits of the finest naval medicine around and I am just getting back. But I have a couple of areas where I think that we have a number of areas of interest.

I wanted to follow up first with your comments on Taiwan. With the threats of missiles targeted at Taiwan, is there not a—is there an appropriate response in terms of our assistance through Aegis-based anti-ballistic missile defense systems?

TAIWAN DEFENSE

Admiral BLAIR. Senator, as I told the Chinese themselves last week, right now we do not have theater missile, theater missile defense, that can engage the sorts of missiles that threaten Taiwan. We are developing four systems, two land-based systems, two sea-based systems. The two sea-based systems are based on the Aegis technology.

As I mentioned, right now the [deleted] missiles that Taiwan faces are not a war-winning capability on the part of the Chinese. We dropped more than 15,000 precision weapons on Kosovo and Serbia, by way of comparison, and you are familiar with what the results of that were. These missiles face a country of 22 million right now. So it is not an immediate defense problem.

What it is is a trend which, should the Chinese continue to increase the number and the accuracy of those missiles—and we are pledged to sufficient defense of Taiwan—we will be required to respond. So the best solution for China and for Taiwan is restraint on the Taiwan side—on the Chinese side, so that the United States would not support an arms race, but if we have to maintain sufficient defense, we will. It is just going to be at what level, what level of arms. The lower the level of arms we can keep it, the more we concentrate on trade, on travel, on financial instruments, on information technology, things that will bring Taiwan and China together so that trust will be built and eventually they can reach a political settlement between them, the better.

Senator BOND. It would be very helpful if our friends in the People's Republic of China understood that, and I appreciate your clear statement on it.

You mentioned in your written testimony some of the problems in Indonesia, and you have stated that you favor eliminating restrictions on foreign military officer education, particularly on IMET, which you have said is fundamentally in the national interest. I had the opportunity to visit the region in January and I found that among our friends and partners there there was a very great fear of what is happening in Indonesia.

One of the recommendations by knowledgeable leaders in those governments, I think who share our views and values was that Indonesia faces the possibility that internal conflict could lead to chaos, and that chaos in Indonesia, the fourth largest nation in the world, the largest Islamic nation in the world, would be a disaster for that region and truly a disaster for international security and our interests.

I asked them, I said, okay, what can be done about it? Their conclusions—and it is almost like they talked together—they all said the Indonesian military has to be brought back into a position

where they are disciplined and they have appropriate training and they are able to restore security in that nation of I guess 13,000 islands at high water.

They suggested that we pursue very aggressively exchange of education, bringing foreign military officers to the United States, participating in IMET. They also said that there ought to be incremental but reciprocal and verifiable steps to provide the equipment they need for their legitimate defensive needs, perhaps coast guard and other spare parts and so forth, equipment that they need to exercise the appropriate role, but that we should do that in a phased basis, demanding reciprocal steps from them which would show that they truly are abiding by the appropriate standards of the military with due regard for human rights.

Their suggestion, the suggestion of these observers and neighbors of Indonesia, was that the police forces are so inadequate that we cannot expect the police forces to maintain security and that it is incumbent on us, through our military presence, to exercise an aggressive, progressive, and positive role in the area.

I note that Indonesia, back on one of these pages, when you were talking about the priorities, U.S. Pacific Command priorities, it did not exactly measure up as a priority. But I get the sense that that may in fact be one of the significant dangers our interests and international security face in Southeast Asia. I would appreciate your comments and guidance on that.

INDONESIA

Admiral BLAIR. Yes, sir. I support the basic outlines of what you describe. I have heard the same advice from other countries in the region and from Indonesians, in fact Indonesians who are not members of the Indonesian armed forces.

I would add that I believe that the police also require a lot of assistance and training. The United States does provide that through the Department of Justice and I support that, and I think that should be increased. As you know, the police were separated about a year and a half ago from the armed forces and they now are transitioning to report to the minister of the interior instead of to the minister of defense. They are on the front lines of internal order and I think that is good.

There is a justice system that has to be developed in addition, with very few crimes, especially those that are of concern to the international community, such as the killing of the three international aid workers in West Timor last year, are brought to justice in a timely or in a comprehensive way. So I think we need to help strengthen the justice system.

Then I think we need to support those in the Indonesian armed forces, the TNI, who are part of the reformist group. This group within TNI seeks to pull out of internal security over time and mainly concentrate on external threats. That becomes more of a navy and more of an air force emphasis because of the nature of the country that you mentioned.

The army needs to be paid properly. Right now a private who is put out on the streets to patrol is terribly underpaid and the temptations to him in terms of getting paid for doing other things are pretty high. He is often not as well trained as he needs to be. He

is given maybe 3 weeks of training and then sent out to very delicate, in the street peacekeeping missions.

So there are a bunch of across the board improvements that do need to be made in the TNI. The way that I think that we reinforce that is exactly as you said, with resuming officer education so that we get Indonesian officers out, the good Indonesian officers who are going to be leaders there, and then that we carefully modulate our engagement with them so that we support those things that are positive in TNI's development and we do not support those elements of TNI and those activities which can be used to oppress the people.

It's a series of tough individual decisions you have to make along there. I think the right people to make them are at the consultation between the ambassador and his people on the scene, those of us who deal with them on a day to day basis, and we sort of work our way forward as you described.

Just to finish off, Senator Bond, I am not one who believes that Indonesia is going to fall apart in the near term. I think Indonesia is going to continue as a unitary state with a lot of turbulence. So I am not one who is telling you the sky is falling. But we need to help Indonesia work in that direction.

Senator BOND. I certainly share your hope, but, I guess just to finish up, you indicated steps that you need to take. Just to bring it down simply, what do we need to do here to remove the constraints, to provide the resources so that you can take this phased steps of assistance towards stabilizing Indonesia?

UNITED STATES ACTIVITIES WITH INDONESIA

Admiral BLAIR. Senator, there are two pieces of legislation which restrict our activity in Indonesia. One was sponsored by Senator Leahy, which keeps back any sort of training, education, foreign military sales, until accountability is taken for the August 1999 activities in East Timor, which were bad, and the refugees are resettled.

Second, there has been a longstanding prohibition on international military education and training coming from the House of Representatives. Those two are the legislative restrictions on them. I absolutely agree with the goals of that legislation, which is to make the Indonesian armed forces responsible and correctly acting. I disagree with the means. I think military education is a way to reach those goals, rather than a reward once you get there. Restrictions on arms sales and restrictions on exercising, on military activity, I think are entirely appropriate and we should not do that for a long time with the Indonesians. But the things that help the reformers reach the positive goals I think we should do, and those two legislative restrictions prevent us, at least in the officer education area.

Senator BOND. Thank you. Thank you, Admiral. I hope to work with the leaders of this committee to see if we cannot move in that direction.

Thank you, Mr. Chairman.

Senator STEVENS. Thank you.

Admiral, I second what Senator Inouye had said about the way you have handled these terrible disasters in your area, and com-

mend you and your forces for the way you have reacted in such a humanitarian way.

I am a little disturbed about the comments you made, about shortfalls in flying hours, ship depot maintenance, real property maintenance, and joint training for this fiscal year. Those comments did pertain to this fiscal year, did they not?

Admiral BLAIR. Yes, sir, they did.

Senator STEVENS. Do you have any way to tell us how that happened, what accounts for that shortfall? We thought we had appropriated a sufficient increase in funds last year. Why are we behind this year, for 2001?

FISCAL YEAR 2001 FUNDING SHORTFALLS

Admiral BLAIR. Senator, I do not have a third decimal point answer. But the——

Senator STEVENS. Did you get the allocation you asked for, Admiral?

Admiral BLAIR. No, sir. We did not have a full year's allocation at the beginning of the year for flying out the flying hour program or for completing the depot maintenance or for completing the service incremental funding of the joint exercise program. The budgeting strategy had been, as it had been the year before, to take supplemental funding and fill up the third and fourth quarter funding to the required limit. As that has not happened yet with the current strategy review going on, the shortages would make themselves felt starting in about August of this year in those three areas.

Senator STEVENS. Well, we do have a dilemma and that is how to sort of return to the normal process. In the last about 6 years, the administration took money from particularly the Operations and Maintenance (O&M) accounts for overseas activities, maintaining peacekeeping, other activities that the President had the right to do under the law, and then came in to us for a supplemental each year.

This is the first time I have heard that the strategy for the budget itself for 2001 involved not contemplating a proper allocation to regions such as yours for O&M. We are not going to have supplementals like that again, I hope. We did not like them and I do not think many people liked them. This year it was my understanding that President Clinton did not take money from O&M last year for these overseas accounts because we did in fact budget for it. We gave money for Bosnia, we gave money for Kosovo, we gave money for Kuwait, we gave money for the operations for the cap over the Persian Gulf.

We fully funded, we thought, all those things. Now we find this sort of embarrassing gap, because the two of us thought we had funded properly the region we represent, and I am sure that the other members of the Senate understood that.

How much money are you short?

Admiral BLAIR. I think one of the best examples, Mr. Chairman, is in the Navy-Marine flight hour program. The traditional amount of O&M that you spend per flight hour was in fact requested and budgeted. However, the reality is as the age of the airplanes is going up those costs are not realistic in terms of being able to fly

old airplanes like the P–3's, like the EA–6's. In fact, the O&M costs are going up on the order of 15 percent per year, and that leaves a gap.

When you drive down into the analysis of it, it is not just that fuel is costing more, which it is. It is primarily in the depot-level repairables, where these airplanes are getting so old that parts are breaking that were not budgeted for and in many cases the companies that actually make that assembly are no longer in business, so these things have to be hand-tooled in depots.

Senator STEVENS. I know you do not like to say, but how much have you asked for? What do we look forward to for your region to make up for this shortfall in this fiscal year?

Admiral BLAIR. In the flight hour program it will be on the order of about $250 million to finish flying the flight plan that the Pacific Fleet and Marine Forces Pacific need to fly the budgeted hours.

Senator STEVENS. Depot maintenance, how much?

Admiral BLAIR. I will have to get you that figure, sir. I do not have that one.

Senator STEVENS. Will you give us those figures for the record. I know that the Department does not like to have us ask such questions, but I think we ought to get prepared for what is coming for this fiscal year. I would like to know for flying hours, ship depot maintenance, real property maintenance, joint training, and other funds that will be exhausted before the completion of the fiscal year, how much do you need to carry out your responsibilities.

[The information follows:]

Senator, our Fiscal Year 2001 Component Command Readiness Supplemental Funding Requirements for the United States Pacific Command theater total $974.9 million. The figures match those recently provided by each of our components to their respective Service headquarters and should match individual Service numbers concerning our theater shortfalls. We are working with the Office of Secretary of Defense, the Joint Staff, and the Services to ensure that all of our critical requirements are met.

A detailed breakout of our requirements follows:

Fiscal year 2001 Commander in Chief, United States Pacific Command component command readiness supplemental funding requirements

Pacific Fleet (PACFLT):	
Flying Hour Program (FHP) (Includes $76 million for Marine Corps Forces Pacific (MARFORPAC))	$252.0
Ship Maintenance Program	244.8
Base Operations Support Program & Sustainment, Restoration and Modernization (SRM)	130.0
Force Protection ($44.4 million in Operations & Maintenance, Navy (OM,N) and $19.4 million in Other Procurement, Navy (OPN))	63.8
Ship Operations	20.0
Contingency Operations Support	1.3
Total	711.9
Pacific Air Forces (PACAF):	
Sustainment, Restoration and Modernization (SRM)	20.2
Base Operations Support (BOS)	20.1
Readiness	20.1
Real Property Services (RPS)/Utilities	18.9
Contractor Logistics Support (CLS)	15.4
Communications (C^3I)	13.1
Quality of Life (QOL)	9.7
Anti-Terrorism/Force Protection (AT/FP)	7.6
Training	2.7

Fiscal year 2001 Commander in Chief, United States Pacific Command component command readiness supplemental funding requirements—Continued

War Reserve Material (WRM)	2.4
Total	130.2
Marine Forces Pacific (MARFORPAC):	
Support of Operations in East Timor	2.7
Strategic Lift	4.6
JCS Exercises	1.0
Utilities ($28 million for Base Operations & $13 million for Family Housing)	42.0
Base Operations Support	10.0
Maintenance of Real Property (MRP)	11.0
Total	71.3
U.S. Army Pacific (USARPAC):	
Command, Control, Communications, Computers, Intelligence, Surveillance and Reconnaissance (C^4ISR) Joint Mission Force ($5.9 million Other Procurement, Army (OPA) & $2.0 million Operations & Maintenance, Army (OMA))	7.9
Support of Operations in East Timor	2.4
Joint Readiness Training Center (JRTC) Transportation	2.7
Utilities Price Adjustment & Government of Japan Burden Share	4.9
A–76 Transition	3.8
Force Protection, Increment One	1.0
Dunker Training	.4
Training Ranges & ITAM (Integrated Training Area Management)	7.3
Well Being (Morale, Welfare and Recreation/Family Support Programs)	2.1
Facilities Sustainment	29.0
Total	61.5
Total for Pacific Theater	974.9

(Note: All figures are operations and maintenance (O&M) unless specified otherwise.)

Admiral BLAIR. Yes, sir, I will get you those figures. Those are the same figures we are providing internally up the tape.

Senator STEVENS. I assume so, but they are not giving them to us, Admiral.

Admiral BLAIR. Yes, sir.

Senator STEVENS. We would like to know what is coming. The immediacy of it is a problem. When will you run out of money?

Admiral BLAIR. July-August, depending on the account.

Senator STEVENS. So you would need funds available by July 1?

Admiral BLAIR. Yes, sir.

Senator STEVENS. You also stated that family housing in Alaska—we both get a little provincial here and we are proud of it, so I am not disturbed about that—is inadequate because MILCON has not been properly assigned to our region for family housing. That worries me in view of the potential that we may face some reallocation or realignment of force deployment in the Pacific in the future.

What is your idea, what is your time frame and plan for that, to meet that need?

MILCON-FAMILY HOUSING

Admiral BLAIR. Senator, as you know, this is a marathon, not a sprint, to update the housing. In Alaska in particular—and also,

there is more than one way to provide adequate housing for our families. The traditional MILCON way is one route, but some great imagination has been shown by General Gamble and the Pacific Air Force in terms of public-private ventures, and Alaska is one of the areas in which we are on the verge of success there.

Fort Wainwright, on the other hand, has these 75-some odd units of what is basically postwar housing that is inadequate. Whether we can use the Air Force model and do it that way or whether it needs a MILCON project, I am not sure. But we do need to replace that over time.

In Senator Inouye's area, now you can drive into Pearl Harbor with pride and see good new housing on either side of the gate there. You can go up in the back reaches of Schofield, though, and we could film "From Here to Eternity" again and never have to do any changes to the sets. So it is a case of working through it.

The Department as a whole is committed to having all of our housing meet suitable criteria by 2010, and if we can sustain the levels of funding we have had in the recent years and we can bring home the public-private ventures that are contemplated and we can overseas continue the level of support by Japan and Korea that we have currently, then, with the exception of some units in the Army Pacific, we can meet that goal.

I believe, Mr. Chairman, that it is the progress towards that goal that is really as important as saying that tomorrow every single set of quarters will be adequate, because people move and people are going. As long as we are heading the right direction, I think that we are in good shape. We need to support that right direction, sir.

Senator STEVENS. Your figures are that they are 75 family housing units short in Fort Wainwright at the present time?

Admiral BLAIR. I know those particular 75. Let me amplify that answer. Those are the ones that I have driven around—I am sure you have as well—that we should not have people living in 2001.

Senator STEVENS. Thank you.

NORTHERN EDGE FUNDING

We welcome the Northern Edge exercise that is ongoing now in Alaska, I was a little disturbed to hear, however, that funding for the exercise was released by the Pentagon 10 days after it started. How did that happen, Admiral?

Admiral BLAIR. Mr. Chairman, we are in a transition year. As you know, in the past that was a year by year exercise based on appropriations. We now have put it into our authorization and plan program. This was the year in between and so the money was not in the right place at the start of the exercise.

Working with the components, we moved the money from other accounts so that we were able to start the full exercise on time, and then we paid ourselves back, as you said, within 10 days of the exercise. I do not anticipate repeating that rope dance next year.

Senator STEVENS. That did not create any part of the shortfall, did it?

Admiral BLAIR. No, sir. We planned and executed it as if we were going to have it and then it did come in, and so we paid ourselves back. It took a lot of hard work by people like General Tom Case, who, as you know, is now my deputy, was the former commander

in Alaska, and working with General Schwartz they made it happen.

Senator STEVENS. Incidentally, I want to commend General Schwartz for his public statement concerning the paint-bombing incidents in our State.

Admiral BLAIR. Yes, sir.

Senator STEVENS. It offended us all. I have seen the tape, as a matter of fact, a strange tape, strange that people would take a tape of themselves doing what they did.

But I do commend him. He was forthright and came right out and put the position of the military right on the table. There was a rumor that one or more of the people involved had been dependents of military people. We still do not know whether that is so or not. But he stepped up to the plate and stood very straight on that issue, and we are very pleased to have a General like that in our command.

Admiral, you are just back from China. We had to cancel our trip to China. I am very interested in your observations about the China situation as far as the future here is concerned. My colleagues sort of, if you will pardon the phrase, danced around the basic problem of Aegis acquisition. Have you come to a conclusion about that?

CHINA

Admiral BLAIR. Yes, sir. I have shared my recommendation with the administration. I would just as soon let them make the call, but I have told them what they need to maintain military sufficiency.

Senator STEVENS. We have had great interest in China. I want to state that I admire the answers that you gave to Senator Bond. But there is a lot that goes into that statement that assumes that the Chinese are ready to work with us. Can you give us your opinion about that? Is there any indication that the Chinese in terms of their modernization plans and their own deployment will desist from establishing a provocation that would lead to a demand for ever-increasing upgrading of the capabilities of the forces on Taiwan?

Admiral BLAIR. So far, Mr. Chairman, they have gradually increased their ability to threaten Taiwan. But with Taiwan's own improvements, including the equipment that we have sold Taiwan, including what they produce themselves, and including what they buy from other countries, Taiwan has been able to maintain the qualitative edge to offset the geographic position and the quantitative edge that a country of 800 million people will have. So the sufficient defense that we are pledged to has been maintained.

The PLA is continuing to modernize its armed forces. Talking with PLA leaders, they have been told that China does not give up the right to take military action against Taiwan and they are carrying out orders to be able to increase their capability to do that.

I would say that they have not—that they could have gone faster than they did. The improvements that you see are not their absolute top priority. The PLA has many other missions—defense of a wide, a huge long border; internal security, particularly in the far west and in Tibet and areas like that.

So Taiwan is not the only focus of the PLA and that is not all they are spending their money on. In addition, military modernization, although it has received more attention in recent years, it is the fourth of the four modernizations that China is pursuing. As you know from your previous visit to China, when you go to China they are mainly working on economic development, getting rid of those state-owned enterprises, increasing the wealth and the efficiency and trying to plug into the world.

When President Jiang and Prime Minister Zhu wake up every morning, the first four or five things they think about have to do with economic development and social improvement. You get down the list before they are worrying about improving their ability to take on Taiwan militarily. So I think that there is an area there where there could be further restraint on their side that would keep the military option off the headlines and out of the debate, and I think that is the right thing to do.

I have thought through the consequences of a conflict across the Taiwan Strait very carefully and all I see are losers. There is damage to military forces on both sides. There is damage to civilians on both sides. There is tremendous economic damage in China, losing the foreign investment and a lot of the trade. There is tremendous commercial damage to Taiwan. At the end of the day, it is not successful from China's point of view; Taiwan is still, is not taken over.

That is a loser for both those countries. The win for both countries is over the long term to emphasis the things that bring them together and to reach some sort of a political arrangement. That is what is in the long-term interests of China and of Taiwan. The way we get there is by de-emphasizing military escalation, by de-emphasizing military rhetoric, and by showing restraint on both sides.

But it does take two to show restraint. In particular, the missile buildup on the Chinese side I think is the part that is the most threatening right now. I talked about that with the Chinese and I think that is the important area in which we should look to them for restraint.

Senator STEVENS. I think we agree with you. As you know, I served in China in World War II and have gone back as often as possible. Senator Inouye and I make trips there whenever we can. I am sad that we cannot go this year.

But when we look at the situation there, we have been convinced that there is a generational problem there. As the new generations come along, we think that the strain between the mainland and Taiwan will decrease. There is every reason in the world for China as a republic to upgrade its military and to modernize in view of its position in the world, particularly in that it has the resources that it has and the population base that it has.

But it worries me considerably that we are about ready—it looks like we are being pushed towards a collision course here as far as the Aegis is concerned with regard to a request to purchase that equipment because of the increased activity along the coastline opposite to Taiwan. We would welcome any suggestions you might have as to what we might do to help you with regard to your comments that you have made on China. Clearly, from my point of view China remains the potential partner in the world as far as

this country is concerned, economically and even eventually politically, I think.

But right now we are still trying to overcome some of the strains of the past. I would hope that we can find some way to deal with this issue without trying to resolve it in the Congress, is what I am saying. I do not know what the results of your recommendations will be, but we are under a new administration. The President said he wants to treat China as a strategic competitor and not as a partner yet. But I think the time will come when we should look at them as a partner in terms of goals throughout the world.

I would welcome, we would both welcome, your suggestions as time goes along.

Do you have any other questions, Senator?

Senator INOUYE. Mr. Chairman, if I may follow up. Obviously, one of the major areas of contention in Congress will be the so-called arms sale to Taiwan. It has been the policy of the United States to provide defensive arms, although there are some who would contend that any sort of arms would be offensive.

Would you consider a Patriot battery as being offensive?

TAIWAN ARMS SALES

Admiral BLAIR. No, sir, I consider that as being defensive.

Senator INOUYE. In the array of ships in the fleet, would you consider a destroyer to be offensive? For example, I would consider a submarine and an aircraft carrier, to be power projectors and therefore offensive.

Admiral BLAIR. Senator, the way I would define defensive systems are those that would enable Taiwan to deal with an air, naval, or ground attack on them. The systems which would be used to intercept those sorts of operations I would consider to be defensive systems.

The Aegis platform and Kidd class destroyers, have also been talked about as being available, are considered fleet air defense systems as they are currently configured. That is, they intercept anti-ship missiles which are fired at the fleet. They also have anti-submarine capability. In the context that we are talking about, I think those are defensive, that class of ship is a defensive system.

Senator INOUYE. So you would suggest that we are still within the present policy of not providing offensive weapons?

Admiral BLAIR. With either of those two platforms, yes, sir.

Senator INOUYE. Thank you very much, sir.

Senator STEVENS. The last question. Admiral, about the situation in North Korea, it has been some time since we were there. How long since you were there? Have you been up there?

NORTH KOREA

Admiral BLAIR. I have never been to North Korea. I looked at it last week, but did not set foot on it.

Senator STEVENS. I think I am interested to know what the level of their modernization is to your knowledge, if we can talk about that here.

Admiral BLAIR. Yes, sir, I can talk in general terms about it. It is just incredible. The economy is still flat on its back. North Korea cannot feed its people, and yet it continues to keep this million

man army supplied. It has a program to modernize the equipment. [Deleted]. They are spending, at a time when you have to keep your coat on in North Korean buildings all the time, indoors or outdoors, it is allocating fuel to training.

[Deleted].

So it is quite clear that North Korea is maintaining a strong military capability, which is 70 percent down on the demilitarized zone (DMZ) threatening Seoul and others, as it relies on external assistance to feed its citizens. When you look at a picture of North Korea at night, you only see a couple of lights in the Pyongyang area and the rest of it is dark because there are no lights available.

I mean, we have kind of gotten used to it over the years, but it is just a bizarre imposition of resources on the North Korean people in order to maintain a military capability. General Schwartz and I keep a very close eye on that, and if conflict breaks out we are going to win, but you do not see a lowering of military tension on the North Korean side to match the offers that they are making in other areas in terms of economic development and diplomatic consultation. There is very much a "military first," to use North Korea's own words, policy there.

Senator STEVENS. Their readiness has not declined during this period of severe strain on their economy?

Admiral BLAIR. They have maintained their readiness during this period, yes, sir, and in some ways increased the capability of weapons.

Senator STEVENS. Well, I do thank you again for coming. We are going to submit some of the questions we have. Particularly, I would like to know about the funding of your areas of operations down around East Timor. I have not asked you too much about what is going on on the strategic review because I assume it is not at the point where we can discuss it.

But I do hope that you can. I would like to have us take our subcommittee out and visit with you and your command again this year and hopefully get a more in depth briefing on the status of our forces and the potential. Any thoughts you might have about potential redeployment of forces, so that we do not get behind in that and we have the capabilities if you might consider redeployments?

I must say, many of us hoped that we would face the problem of deciding what to do with forces in South Korea. We thought for a while things were going to calm down and cool off. But I do not see that happening now, and from what you have said I gather you do not, either.

Admiral BLAIR. Sir, I think we have a ways to go before we see real military capability go down to the point that we should change our force posture. As you know, President Kim, who from my mind has the clearest eye view of what is going on there, very much wants a U.S. military presence in his country, to which he is willing to contribute, even following reunification. It would not be the same posture that we have now. It would have different characteristics. But he believes that is in his country's interests, and I believe it is in our country's interests.

Senator STEVENS. As my friend from Hawaii said, the future expansion and capability of our economy is in your area, and I think

that there is no question that we have to maintain a robust presence in the Pacific. We would like to be able to work with you. We will not be marking up this bill as early as we thought this year, so hopefully we will have a chance to confer with you before we get around to the markup of the Defense Subcommittee bill.

Any further questions, Senator?

Senator INOUYE. No.

ADDITIONAL COMMITTEE QUESTIONS

Senator STEVENS. Again, thank you very much for coming. This is a very strange period of time here right now, Admiral. I hope you will pardon the conversations that went on and the notes that had to be passed back and forth to keep going with our friends who are on the floor at the same time we are here with you.

Thank you very much.

[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

STRATEGIC REVIEW

Question. In your capacity as Commander-in-Chief of U.S. Pacific Command, what engagement and role have you played in Secretary Rumsfeld's strategic review?

Answer. Secretary Rumsfeld has provided me a draft copy of his defense strategy review for comment, and I have provided a response.

Question. There are reports in the press that the strategic review will recommend a shift in focus toward the Pacific, a strategy that Senator Inouye and I have long advocated. Can you comment on why the Pacific Ocean is the most likely theater of future major U.S. military operations?

Answer. The Asia Pacific region contains about 55 percent of the world's population including the world's two largest countries: China and India. About one-third of U.S. trade is with countries in my theater, which produce 26 percent of the Gross World Product. The region has the world's six largest armed forces: China, United States, Russia, India, South Korea and North Korea, four of which have nuclear arsenals: United States, Russia, China and India. China, Russia, India and Indonesia all seek to extend their influence in the region over time. Japan is reevaluating its defense posture. Communal violence caused by civil wars, religious and ethnic differences flares throughout the region. This combination of population, military forces, competing developing nations and economic potential is unique this part of the world. Unless the United States is engaged and steady in its relations with the Asia-Pacific region, it risks a region of rivalry and conflict.

OPERATING CHALLENGES

Question. What are your major operating challenges that are unique to the Asia-Pacific region?

Answer. Operating in the Asia-Pacific region presents a myriad of unique challenges. The United States Pacific Command (USPACOM) area of responsibility contains 43 countries, and over 105 million square miles totaling 52 percent of the earth's surface. The region spans 14 time zones. Countries in this region field the world's six largest armed forces. Four of them also have nuclear arsenals. Conflict in the region would potentially involve large-scale combat. The rich resources throughout this region also present potential flash points for crisis and conflict. Additionally, the governments and societies of major countries in the region are in transition. The strategic landscape also includes significant transnational threats. First is proliferation. There are four countries in the region with nuclear weapons capability, and many more with chemical and biological capability. This widespread capability increases the threat of weapons of mass destruction use against United States forces and citizens. Next is terrorism. While significant terrorist incidents in the Asia-Pacific region trail those in other parts of the world, terrorist related events show an increasing trend. Finally, drug trafficking throughout the Asia-Pacific region continues to threaten the United States and other countries in the re-

gion. Rich in resources and full of potential flash points, the Asia-Pacific region poses unique challenges to our nation.

As the military element of U.S. national power in the Asia-Pacific region, USPACOM has the following mission: Ready today and preparing for tomorrow, the USPACOM challenge is to enhance security and promote peaceful development in the Asia Pacific region by deterring aggression, responding to crisis and fighting to win. Ready Forces are the first component of our strategy. Our Pacific forces consist of forward deployed, forward based, and forces based in the continental United States. Our overseas deployed forces consist of forward-stationed forces, located primarily in the Republic of Korea and Japan, along with maritime forces afloat in the western Pacific. Our command has forces forward based and home ported in Hawaii and Alaska. The total overseas deployed force is about 100,000 military personnel. Finally, USPACOM also has forces on the West Coast of the United States. The total of all is about 300,000 military personnel. This is the largest number of U.S. military personnel dedicated to any regional theater.

Preparing for tomorrow is the second component of our strategy. Joint Vision 2020 is the conceptual template for the development of future joint warfighting. Based on high quality people, equipped with the technology of the information revolution, the armed forces of the United States will be faster, more lethal, and more precise than today. We will achieve this vision by joint experimentation (JE). Through JE we seek to leverage joint and combined operational concepts and technologies. We seek breakthroughs in joint and coalition warfighting as we transform our operational schemes to the circumstances of the 21st century. As USPACOM and our allies and partners exploit the opportunities of the revolution in military affairs, our challenge will be to ensure our objectives are met across the spectrum of major theater war, crisis response, and regional engagement.

The heart of our mission is to fight and win. Nowhere in the Asia-Pacific region is this part of the mission more clear than on the Korean peninsula. For the past 50 years the Republic of Korea and the United States have successfully checkmated a North Korean regime openly committed to reunification of the peninsula by force. The U.S. contribution to deterrence includes a mechanized division and air forces maintained at peak readiness. Ready to fall in on these troops are powerful naval, air, and ground forces, some already in the Pacific, both ashore and afloat, and others in the United States.

A critical challenge to our mission is our day-to-day engagement in the theater to enhance security and promote peaceful development. By remaining a regional military leader our intent is that no nation will believe it stands to gain by military aggression. A secure peace provides the foundation for prosperity and personal freedom to grow. Our goal is to help nations in the region to learn to be multilateral partners rather than regional adversaries. We want to expand the foundations for multinational security arrangements, to include all nations who desire to participate. Our ultimate intent is to create conditions where states do not perceive each other as enemies based upon historic animosities, but come together to deter any power that would threaten regional peace. Regional engagement involves encouraging and reassuring allies and security partners, and promoting professional relations among all militaries in the Asia-Pacific region.

An integral component of our engagement activities involves our Joint Exercise Program. Bilateral and multilateral exercises are a primary means for developing and evaluating operational readiness. Over 80 percent of USPACOM's exercise activity involves training forces and staffs in the tasks they need to successfully perform assigned missions. The remainder is for basic skills. Last year, USPACOM conducted over 300 exercises with 37 countries, many joint/combined exercises with allies throughout the theater. Our exercise program faces unique challenges with the tyranny of distance created by the vastness of this area of responsibility coupled with cost escalation and reduced funding.

USPACOM is here to stay in the Asia-Pacific region with ready, powerful, forward-deployed forces. Operating with allies and partners in the region, we deter aggression, we respond to crisis, and we engage in a wide range of day-to-day activities throughout the region. For the future, we are developing new dominant warfighting capabilities through joint experimentation. We are working to build on our many strong bilateral relationships to form multilateral security structures in the region, building a foundation for peaceful development to the entire region's benefit. The aforementioned efforts address our unique major operating challenges in the Asia-Pacific region. Our current readiness deficiencies, reduced funding, large geographic coverage, major emerging requirements with declining resources, create additional burdens and strain our ability to meet these challenges.

FORCE STRUCTURE

Question. We've maintained the "base force" in the Pacific since the mid-1980s. A lot has happened in the region in the intervening years. How should we look at changing, reducing, or repositioning those forces in the years ahead and is that effort underway?

Answer. I have provided recommendations to the Chairman and to Secretary Rumsfeld. The Secretary is conducting his review precisely to answer these types of questions. I will say this however; we have seen substantial diplomatic movement in the last year on the Korean peninsula. But I do not envision any change to or reduction of our forces there until the North Koreans are ready to reduce their military posture as part of some verifiable confidence building measures; so far, they've been unwilling to do that. As for the rest of Asia, this is one area of the world where daily activities of the United States military are crucial to our influence. We are an Asia-Pacific nation, but we have no Asian territory. We must be out there actively working with our allies and friends to reassure the region and promote peaceful change. In the future, I would like to see our forces be more balanced throughout the Asia-Pacific, in multiple locations, away from densely populated areas, and near adequate training facilities. I'd also like to see them postured to be more expeditionary, because of the vast distances. Even operating from our Asian bases, we could be thousands of miles from where we're needed.

Question. With the perception of the threat shifting from the Korean peninsula to the Taiwan Strait, do you envision that will impact force levels within the theater?

Answer. The perception of the threat shifting from the Korean Peninsula is just that—a perception. Although we are encouraged by the political changes on the Korean peninsula, as General Schwartz stated in his testimony, we have seen no reduction in the military threat from North Korea. If anything, the North Korean military is receiving an even greater share of the Democratic People's Republic of Korea's limited resources. Any changes in our posture there must be measured and only taken if the threat is lessened. These changes would need to be of a scope and pace designed to maintain deterrence. Moreover, countries in the region want us to stay in Korea, even after any reconciliation, and I believe this is in our best national interest.

Question. Have rapid advances in military technology and capabilities changed the way we think about force structure and how we project power throughout the theater?

Answer. Advances in communications technology are revolutionizing our command and control concepts. Precision guided weapons have increased our lethality while increasing stand-off distances as threat environments become denser. Unmanned Airborne Vehicles (UAVs), stealth and supercruise will bring needed enhancements to combat capability. However, the physical characteristics of my theater, not technology, most influence what we are able to do here. Our access to the region is fairly good, but it's limited by the long distances and large areas covered by water. After 50 years of jets, transports still fly at about 600 miles per hour, and the Strait of Malacca is still about 3 weeks steaming time from San Diego. Logistics, not technology, tend to drive the operational tempo, and dictate that we conduct most operations from forward bases. Together with our components, we are working on initiatives to leverage technology to reduce forces forward in a conflict. This will eliminate costly delays in deployment time (build up/tear down) as well as increased force protection capabilities. Pacific Air Force's program to upgrade its technology to create its main Combined Air Operations Center back in Hawaii rather than forward deployed is one such example. Yet there are significant startup costs for these investments.

Ballistic and cruise missile inventories of regional powers are steadily increasing and posing challenges. To protect our access to bases and ports, we must develop and field effective tactical and theater defenses against cruise and ballistic missiles as soon as possible. Finally, we must remember we are confronted by a thinking and changing enemy who will adapt to and counter any new technology we field. Therefore it is imperative that we likewise train our people and procure systems that can more rapidly and effectively counter this resourceful entity.

MILITARY ENGAGEMENT WITH CHINA

Question. With respect to United States-China military-to-military exchange program, is the Chinese government allowing the United States access to visit the same kind of facilities in China as we show the Chinese in the United states?

Answer. In the last two years, I think the Chinese have allowed us access to visit roughly the same kinds of facilities as we show them in the United States, essen-

tially, headquarters buildings, educational facilities such as the Asia-Pacific Center for Security Studies (APCSS) and the Center of Excellence (COE), and organizations and training facilities dedicated to Search and Rescue, Humanitarian Assistance and Disaster Relief and Peacekeeping Operations. Access could be better, and the People's Liberation Army (PLA) is inclined to take our delegations to sites that have been visited by earlier U.S. delegations. However, the PLA's organization and capabilities are overall at a lower level than ours are. It is important to note that our military-to-military exchanges were stopped from May until December 1999, as a result of the accidental bombing of the Chinese embassy in Belgrade. Also, when the military-to-military exchange program was restarted in 2000, we implemented significant new restrictions that were stipulated in the National Defense Authorization Act. Neither we nor China allow the other access to visit what are considered sensitive military capabilities or facilities. The bottom line is, exchanges are limited and roughly reciprocal.

The recent EP–3 accident and aftermath have caused the Secretary of Defense to undertake a comprehensive review of our military to military activities with China. USPACOM is an active participant in this review.

EAST TIMOR

Question. What kinds of support and personnel is PACOM currently providing the United Nations' operations in East Timor?

Answer. There are no United States Pacific Command (USPACOM) military personnel assigned to the United Nations Peacekeeping Force (UNPKF) in East Timor or to the United Nations Transitional Authority East Timor (UNTAET).

The United States Support Group East Timor (USGET) has twelve core staff members who coordinate USPACOM rotational presence operations in East Timor. Our activities in East Timor include monthly ship visits, medical and dental civic action projects and engineering support through December 2001 and will include a maximum of forty-five personnel deployed to East Timor during peak periods. In addition, twice a year an amphibious ready group, including its reinforced medium lift helicopter squadron and navy landing craft, will conduct community relations, and humanitarian and civic assistance projects in support of the people of East Timor's transition to independence.

As Commander-in-Chief, United States Pacific Command (USCINCPAC), I do not provide capabilities to the peacekeeping force other than staff advice and technical assistance on a case by case basis within the capabilities of the personnel assigned to USGET. For example, the USGET civil military affairs officer acts as the USGET liaison with the UNPKF headquarters. He keeps the UNPKF informed of day-to-day USGET activities, and provides situational awareness to the Commander, USGET (COMUSGET). Additionally, the civil military affairs officer coordinates United States rotational presence activities with UNTAET and with non-government organizations and private organizations operating in East Timor. This coordination maintains a professional relationship between UNTAET and USGET, but not a supporting or command relationship.

Likewise, the USGET engineer planner periodically provides subject matter expertise and technical assistance to UNTAET engineers and coordinates USGET engineering projects with the East Timor Transitional Authority. This deconflicts community relations and humanitarian activities between United Nations sponsored nation building projects and USGET community relations and humanitarian assistance projects in East Timor.

Force protection is an area of concern for all personnel in East Timor. The collocation of the USGET intelligence officer with the UNPKF allows for the USGET intelligence officer to gain a greater understanding of security issues both within Dili and throughout East Timor. USGET does not provide any intelligence products to the United Nations (U.N.); however, the USGET intelligence officer integrates with the UNPKF staff where possible to allow for better coordination between the UNPKF and USGET on Force Protection matters.

Technical advice and staff assistance is provided only within the current capabilities of the USGET staff, and does not require additional staff or other resources. This support is consistent with the terms set out in the President's February 2000 congressional notification regarding U.S. military activities in East Timor, as required by the U.N. Participation Act, and the recent Helms-Biden amendments to that Act.

Question. I understand that PACOM is funding operations in East Timor as an exercise rather than as a contingency operation, making it ineligible for DOD contingency funding. How has your command absorbed these costs, and what programs have been reduced to fund these costs?

Answer. The Office of the Secretary of Defense classifies current deployments to East Timor as training, and requires funding to be provided by the Service component commands. As such, operations in East Timor are not eligible for reimbursement from the Overseas Operations Contingency Transfer Fund (OCOTF). The four component commands in the United States Pacific Command are each absorbing East Timor costs with different programs. The programs affected include flying hour, ship operations, combat support forces, operating forces' equipment, engagement, and sustainment, restoration and modernization. The total costs for the fiscal year 2001 program are estimated at $7.6 million. While small in comparison to other operations worldwide, the unbudgeted, un-reimbursed costs can eat up significant operational funding for our components. Marine Forces Pacific bore a significant portion of the East Timor costs and has a relatively small budget. Any unprogrammed requirements directly impact other areas.

Question. As East Timor prepares for independence in late 2001, what is the current and long-term threat to East Timor's security?

Answer. Three issues threaten the current security situation in East Timor: rising street crime, the external pro-integrationist militia threat, and emerging politically motivated violence. Two issues potentially threaten East Timor's long-term security situation. First, the present militia threat, based on a refugee population in West Timor, could form the nucleus of a long-term insurgency to destabilize an independent East Timor. The second long-term threat is a potential deterioration of East Timor's strategic relationship with Indonesia, although bilateral relations are presently very good.

NORTH KOREA

Question. Describe the North Korean military situation and overall readiness?

Answer. North Korea possesses the fifth largest military is the world, composed of approximately 1.6 million personnel [deleted]. Their most formidable conventional component is ground forces, composed of 15 Corps equipped with a wide variety of weapons systems [deleted]. They also maintain the world's largest number of special operations forces [deleted]. However, the ground forces are beset with problems and overall military capability is declining. The functional collapse of North Korea's economy has resulted in increasing military shortfalls, to include obsolete military equipment, inadequate training, and the effects of widespread chronic malnutrition on its soldiers.

To mitigate the declining ground forces capability, [deleted].

North Korea's primary counterbalance to declining military capability is the threat posed by deployed SCUD and NO DONG missile units. [Deleted].

Problems of obsolescence also effect the North Korean Air Force and Navy. However, the Air Force retains a large aircraft inventory, [deleted], many of which train for limited ground controlled air intercept and ground attack. While North Korea Naval capability is limited to littoral waters, every vessel in North Korea is capable of mine-laying, and if such mines were set adrift, it would pose a substantial threat to international shipping in the area. [Deleted].

KOREAN PENINSULA

Question. With the ongoing dialogue between North and South Korea and their economic cooperation initiatives, what are the prospects for near-term conventional force reduction negotiations on the peninsula?

Answer. The prospects for near-term conventional force reduction negotiations do not look good. Military measures are making virtually no progress in the ongoing North-South dialogue. The Defense Ministers only met once and at this meeting North Korea refused to discuss any matters other than the transportation corridor through the Demilitarized Zone (DMZ). The North Korean side rebuffed all attempts by the Republic of Korea (ROK) Defense Minister to raise confidence-building measures at the meeting. The North canceled the scheduled second meeting. While the ROK continues to make considerable progress in demining south of the DMZ along the path of the Seoul-Sinuiju railway, North Korea has done little on its side of the DMZ. North Korea has not yet signed the bilateral agreement that will govern security inside the DMZ transportation corridor either. In general, the North Korean actions to date focus on their demands for maximum economic benefit, especially the provision of electrical power, but offer little in return in the way of military confidence building measures or creating an environment conducive to foreign investment.

EXERCISE NORTHERN EDGE

Question. It is my understanding that the exercise funding for NORTHERN EDGE was just released by the Pentagon—ten days after the exercise started. How can we avoid this from happening in the future?

Answer. In past exercises, the funding for joint exercise NORTHERN EDGE (NE) was passed by the Joint Staff directly to the Commander, Alaska Command (COMALCOM). COMALCOM in turn passed the funding directly to the units participating in the exercise. For NE01 the funding flow changed by Congressional direction. The conference report for the Fiscal Year 2001 Defense Appropriations Act directed "the Secretary of Defense to transfer funds from the Chairman, Joint Chiefs of Staff exercise fund to the service operation and maintenance accounts to cover the incremental cost of this exercise." This direction necessitated a reprogramming of Department of Defense appropriations and created several more organizational layers between the source of funds (the Joint Staff) and participating units in the field. Once the reprogramming was accomplished (in the middle of the transition between administrations), funds had to be passed from the Joint Staff to the Services, from the Services to major commands, from major commands to local/regional commands, and finally to the participating units. To mitigate the impact upon NE01 participating units, all Services "fronted" the funding for exercise participants in anticipation of reimbursement (received ten days after the exercise started). We do not anticipate any similar problems in the future. United States Pacific Command and the Joint Staff have worked closely with the Office of the Secretary of Defense to properly align the required funding for future exercises.

Question. Is funding for NORTHERN EDGE included in DOD's long range funding plan?

Answer. We do not yet have details of the fiscal year 2002 defense budget request or the associated Five-Year Defense Plan. The President will provide those details after Secretary of Defense Rumsfeld completes his ongoing strategy review.

QUESTIONS SUBMITTED BY SENATOR DANIEL K. INOUYE

INTELLIGENCE ASSETS IN THE PACIFIC

Question. Admiral Blair, could you comment on the requirements versus available ISR assets under your command?

Answer. The numbers of airborne reconnaissance assets assigned to United States Pacific Command [deleted]. We continue to advocate requirements for additional aircraft with the Joint Staff and Services. Our airborne collection requirements continue to [deleted]. At a minimum, as Commander-in-Chief, United States Pacific Command, I require an [deleted].

Question. Admiral Blair, what is your view of Global Hawk and would that have a positive impact if it were deployed in your AOR?

Answer. We are very excited about the potential Global Hawk presents to the United States Pacific Command (USPACOM) Area of Responsibility (AOR). With its long range and duration, Global Hawk can help us conquer the "tyranny of distance" in the Department of Defense's largest geographic AOR. Though its initial operating capability (IOC) is still 3 or more years off, we at USPACOM intend to take the lead in both deployment and employment of Global Hawk, enhancing our indications and warning (I&W) capabilities both on the Korean Peninsula and in other key areas of interest in the Pacific. Global Hawk's potential to surveil the broad ocean area is already gaining the interest of key regional allies, such as Australia, to whom Global Hawk is being demonstrated during Exercise TANDEM THRUST 01.

Global Hawk will have a positive impact by helping address our shortage of intelligence, surveillance and reconnaissance assets, a key challenge for USPACOM. However, it is critical to note that Global Hawk's current and near-term programmed capabilities will make it a good complement to the U–2 aircraft we currently employ; Global Hawk will not be able to replace the U–2 until possibly late in the decade (depending on payload development decisions).

SUBCOMMITTEE RECESS

Senator STEVENS. If there is nothing further, the subcommittee will stand in recess.

[Whereupon, at 11:35 a.m., Wednesday, March 28, the subcommittee was recessed, to reconvene subject to the call of the Chair.]

DEPARTMENT OF DEFENSE APPROPRIATIONS FOR FISCAL YEAR 2002

WEDNESDAY, APRIL 25, 2001

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

The subcommittee met at 10 a.m., in room SD–192, Dirksen Senate Office Building, Hon. Ted Stevens (chairman) presiding.

Present: Senators Stevens, McConnell, Shelby, Inouye, and Dorgan.

DEPARTMENT OF DEFENSE

CHEMICAL DEMILITARIZATION PROGRAM

STATEMENT OF HON. JOSEPH WESTPHAL, ACTING SECRETARY OF THE ARMY

ACCOMPANIED BY:

JAMES L. BACON, PROGRAM MANAGER FOR CHEMICAL DEMILITARIZATION PROGRAM

MICHAEL PARKER, PROGRAM MANAGER FOR ASSEMBLED CHEMICAL WEAPONS

OPENING STATEMENT OF SENATOR TED STEVENS

Senator STEVENS. Good morning. Today's hearing concerns the Department of Defense's (DOD) chemical demilitarization program. It consists of two panels. The first panel will discuss the overall program and consists of Acting Secretary of the Army Joe Westphal and program managers Jim Bacon and Mike Parker. The second panel will focus on the concerns of some of the communities located next to chemical weapons storage disposal sites.

Let me first welcome you, Mr. Secretary, and thank you for your role as Acting Secretary of the Army. We are delighted to have you with us and know of your work in the past. I can testify that you are a good fisherman.

Dr. WESTPHAL. Thank you, Mr. Chairman.

Senator STEVENS. I look forward to spending time with you again.

The disposal of chemical weapons poses one of the more difficult challenges to our Nation and the Department of Defense in selecting the best technology for Kentucky and Colorado, controlling costs and assuring safety in terms of all actions of the Department.

I want to recognize my colleagues here. Senator Shelby, do you have a comment?

STATEMENT OF SENATOR RICHARD C. SHELBY

Senator SHELBY. I have a brief opening statement, if you will permit me, Mr. Chairman.

Senator STEVENS. Please.

Senator SHELBY. Mr. Chairman, first of all let me thank you and also Senator Inouye for agreeing to hold this hearing so that we may take a closer look at the chemical demilitarization program and the assembled chemical weapons assessment programs.

For those of us in the Senate who have stockpiled chemical weapons in our State, I believe this is a very difficult and at times a divisive issue. Different States have different issues and concerns. I compliment the chairman and the ranking member for their patience and understanding during the preparation of this hearing. I would also like to recognize Mr. Tom Hawkins of the subcommittee staff for his diligence and responsiveness during the planning of this hearing.

WELCOMING OF PANELISTS

I would like to welcome all the panelists here today and look forward to their testimony regarding the two programs. I would especially like to welcome Ms. Lindell, Mr. Kenney, and Mr. Henderson, who are from Anniston, Alabama, my home State. Thank you for your concern for your community and thank you for being here today.

Mr. Chairman, the destruction of stockpiled chemical munitions has been successfully completed on Johnston Atoll and operations continue in Utah. Incineration is scheduled to commence next year in Anniston, Alabama, and also in Oregon. However, the fact that the incinerator will go on line next spring has heightened, I believe, a sense of fear in a lot of people in the Anniston, Alabama, community.

Today I would like to ask the Army and the Federal Emergency Management Agency (FEMA) why such a state of fear exists in Anniston. I am hopeful that they will have explanations and solutions. I would also like to give some of my constituents that I mentioned an opportunity to voice their concerns here today. We must remember that they are the ultimate stakeholders in this matter. They live in these communities and I think most of us are aware of that.

Mr. Chairman, thank you for holding this hearing.

Senator STEVENS. Thank you.

Senator McConnell.

STATEMENT OF SENATOR MITCH MC CONNELL

Senator MCCONNELL. Thank you, Chairman Stevens.

You know, if General Washington had run the continental army the way our chemical weapons destruction efforts have been managed, it is an absolute certainty that we would still be sipping tea and dining on crumpets. I am not exaggerating when I say that in all my years as a Senator I have never seen a Federal program that has been more poorly managed than this one.

What exacerbates the problem is the reality that poor oversight can lead to much more than increased cost and schedule delays. It

can lead to disastrous accidents that seriously threaten men, women and children in communities around the country.

Quite frankly, with the exception of the loyal support from the chairman of this subcommittee, there are very few members of Congress who are interested in wrestling with this issue. I can well understand why. Destroying our Nation's chemical weapons consistent with our commitments under the Chemical Weapons Convention may be important, but it is not what I would call a glamorous undertaking.

That said, the evidence is undeniable. This is a program in desperate need of new management. I am proud to have been involved in forcing—and I use that word intentionally, forcing—the Army to conduct an evaluation of alternatives to incineration as a means to destroy these weapons. Despite the General Accounting Office's (GAO's) 1992 recommendation that the Army determine whether faster and less costly technologies exist for destroying the stockpile, my effort was met with strident, strident opposition by everyone within Program Manager for Chemical Demilitarization (PMCD).

Despite this fact, I am pleased that under the leadership of Mike Parker and his team today a total of four alternatives have been successfully demonstrated and it is entirely likely that one of these could be deployed in Kentucky in the near future. In addition, this effort relied on considerable input from the public and other non-DOD sources. I think all who participated would agree that this aspect was the most successful part of the program, as people from all sides of the debate became invested in a positive outcome.

Unfortunately, the larger destruction program continues under a shroud of deception, producing embarrassing results. I submit that the time to institute reform is now. Secretary Rumsfeld should include in his comprehensive review an honest evaluation of the chemical weapons program. If this occurs, there is no question in my mind that the need for improved management and accountability will become crystal clear.

DEMILITARIZATION COSTS

One need only look at the mountain of Army, DOD, and private reports which have been issued on the chemical weapons demilitarization program over the last decade to see that the need for reform is real. In 1985, the year I came to the Senate, the initial estimate for the cost of destroying America's stockpile was $1.7 billion. The latest publicly stated cost projection is $14.1 billion. That is a staggering increase of 829 percent.

What have we gained with the extra cost? According to a 1998 independent review, "Even inside the DOD and the Army, the program lacks credibility." No one appears to want to take charge because it is seen as a disaster with no solution, and even Dr. Jacques Gansler the recently departed Under Secretary of Defense for Acquisition and Technology, stated that the program "requires a number of management improvements and needs to improve stakeholder involvement and program transparency through the use of the Assembled Chemical Weapons Assessment (ACWA)-type public outreach as a model across the chemical weapons program."

To that, Mr. Chairman, I can only add, amen. The issue of accountability must be dealt with and I intend to pursue solutions

with the Department. But until DOD decides to take ownership of this program, we will be here every year lamenting the ever-spiraling budget and more missed deadlines. We owe it to our constituents in Alabama and Kentucky and other places whose homes, workplaces, and schools border these destruction facilities to stop this embarrassing trend in its tracks.

Thank you very much, Mr. Chairman, for holding this important hearing.

Senator STEVENS. Thank you.

Mr. Secretary, the news accurately reports a comment I made at the White House yesterday about needing more money in this year's budget for this committee. One of the reasons I pointed that out to them was we have a series of programs that have escalating costs and yet we have some fixed costs for acquisition. We must cut one or the other. We must either postpone airplanes or acquisition of new ships or acquisition of tanks, or we must find some way to get these programs like this one back under control.

I do not see how we can do it in 1 year. I really think we have an absolute crunch in terms of the defense appropriations bill this year.

Senator Inouye, I have proceeded in your absence. I apologize.

STATEMENT OF SENATOR DANIEL K. INOUYE

Senator INOUYE. That is all right. I am late.

Senator STEVENS. Do you want an opening statement? Are you sure? We have got plenty of time.

Senator INOUYE. Make it part of the record.

Senator STEVENS. Well, let us hear it.

Senator INOUYE. You want to hear about it?

Senator STEVENS. Yes.

Did you not come to hear his statement? I did.

Senator INOUYE. Well, Mr. Secretary, good morning, sir.

Dr. WESTPHAL. Good morning, sir.

Senator INOUYE. We appreciate that you and your colleagues are here to give us some wisdom. We need that here. I know that the committee also will hear from a second panel, including Mr. Salter from the FEMA, and several representatives from local citizens groups, and to them I also extend my greetings and welcome. I join my chairman in doing that.

Today the committee will review DOD's chemical demilitarization program. It is certainly true that issues of great national and international importance too often have unavoidable and sometimes dire consequences for local communities. This of course is the case in war as well as in actions such as trade embargoes, for example. Disposing of our chemical weapons is no less an issue of great national and international importance, but one with clear local consequences.

CHEMICAL WEAPONS CONVENTION COMMITMENT

The United States is bound by the Chemical Weapons Convention, ratified by the Senate, to eliminate these horrific tools of war by the year 2007. Yet, of equal consequence to this committee is ensuring that DOD's chemical demilitarization program meets its commitment to safely and quickly dispose of these weapons.

As all of us in this room understand, protecting the public health is job number one for this program, and that is why the Congress has required the Department to seek the safest and the most effective technologies for eliminating our chemical weapons. I know that this is a risky and costly task, but I am certain you will agree that must be done.

Mr. Secretary, your challenge today is clear, to present to the committee a statement about the risks and the successes of DOD's chemical demilitarization program and to give us a view of the path ahead, one that will ensure the safety of our communities and meet our commitments to our Nation. We welcome your testimony, sir. As you know, although we do not have a chemical facility in our back yard, there is a little island down the way that we are concerned about in Hawaii.

Senator STEVENS. Thank you very much, Senator.

Mr. Secretary and for all witnesses, we will print your statements that you presented to the committee in the record in full. We would like to have your comments for the committee now.

OPENING STATEMENT BY ACTING SECRETARY WESTPHAL

Dr. WESTPHAL. Thank you, Mr. Chairman and ranking Senator Inouye, Senator Shelby, Senator McConnell. I am delighted to be here. I am particularly delighted to have the opportunity to get more immersed into this program. As you know, I am fairly new to this job. I do pledge to all of you that I will take the time to educate myself and to understand better the issues you have raised today. We will have people in the audience here that will also be checking in on the comments of the second panel to ensure that we were well coordinated on that.

Mr. Chairman, I brought Jim Bacon, who is our program manager for the chemical demilitarization program, and Michael Parker, who is our program manager for the Assembled Chemical Weapons Assessment (ACWA) Program. They are the experts. We are going to be addressing some fairly technical or highly technical and complex issues today, so I hope you will indulge me. I will probably ask them to address many of the technical questions you may raise during the questions and answers.

As you know, the Department of Defense in 1985 took over this program when you mandated the Department to carry out the destruction of the U.S. stockpile of chemical agents and munitions. Through that you also required the Department of the Army to be the essentially executive agent or to manage the disposal program.

The program is composed essentially of four projects: the Chemical Stockpile Disposal Project. In 1985, we were required to destroy the stockpile of unitary chemical weapons at nine sites, including Johnston Island.

The second project is the Chemical Stockpile Emergency Preparedness Project (CSEPP), which was established in 1988, to help communities in ten states to enhance existing emergency management and response capabilities.

The Non-Stockpile Chemical Materiel Product was established in 1993 to identify, locate, and destroy binary chemical weapons warfare materiel, former production facilities, and recovered chemical warfare materiel.

Then the fourth project, the Alternative Technologies and Approaches Project, was established in 1994 to develop and support testing of two technologies for neutralizing chemical agents at two sites that store only large containers holding one type of agent.

Also, in 1997 the Assembled Chemical Weapons Assessment Program was established. This program was designed to test technologies other than incineration for destroying assembled chemical weapons. Established by Congress in 1997 to test these technologies, this program is, as I mentioned earlier, managed by Mike Parker here.

MAJOR ACCOMPLISHMENTS

Now, if I may, I would like to just briefly address some of the major accomplishments and activities in those particular projects. The United States originally maintained about 31,496 tons of chemical agent at these nine storage sites. To date we have destroyed over 22 percent of the original tonnage, while 90 percent of the total original stockpile is under contract for destruction.

By April of 2000, April 29 of this year, we were required to have destroyed 1 percent—excuse me, last year—1 percent of the chemical weapons that were declared at the time of the treaty's entry into force. By that time we had well exceeded that milestone, having destroyed over 15 percent of those weapons. We will pass the next significant treaty milestone ahead of schedule, which will require that we have 20 percent of category one chemical weapons destroyed by April 29th of 2002.

The greatest accomplishment of the program by far is the reduction of risk to the public, the workforce, and the environment by destroying chemical agents. It continues to be a reality that the ongoing storage of chemical weapons remains the greatest risk to local communities residing near stockpiles. Every day we operate a disposal facility, we are safely, effectively, and significantly reducing the risk.

Our priorities for fiscal years 2001 and 2002 include maintaining the momentum we have achieved and continuing to make progress at each of the chemical stockpile sites under construction or in operation. Of critical importance are the selection of disposal technologies at Pueblo and Blue Grass locations and the acquiring of funding necessary to begin demilitarization activities at those sites.

We are supporting a Defense Acquisition Executive review of several aspects of the Chemical Demilitarization Program, including our compliance with the Chemical Weapons Convention, life cycle costs and schedule estimates, program plans for the closure of chemical agent disposal facilities, and the path forward to implement disposal technologies at Pueblo and Blue Grass. The review is scheduled to be completed during the first quarter of fiscal year 2002.

In addition to the Defense Acquisition Executive review, we are supporting the completion of the Congressionally directed studies of the Chemical Demilitarization Program, including an assessment of the feasibility and advisability of using stockpile facilities for disposal of non-stockpile material. Each of these assessments has the potential to drastically change the scope of the program and the

funding requirements necessary to execute the chemical demilitarization mission.

Now, as stated earlier, maintaining momentum in our program is vital to the safety of our communities and to meeting our international treaty obligations. We have made tremendous progress in the safe destruction of chemical agents and munitions in an environmentally sound manner while continuing to address the challenges that such endeavors bring.

So, given those broad statements of what we perceive to be a program that has our utmost concerns for safety, health, and environmental protection, I am personally anxious to understand also what the Congress's concern and what your communities' concerns are regarding the management of that program and what we need to do to improve and to assure you and your constituents that safety and environmental protection are of utmost significance.

Senator Inouye, you mentioned Johnston Island. As you know, the Johnston Atoll Chemical Agent Disposal System was constructed back in 1985. We have destroyed 2,031 tons of chemical agents and in November of 2000 we successfully and safely destroyed the last chemical munitions in the Johnston Island stockpile, a major milestone in the history of chemical demilitarization.

Closure activities have begun at Johnston Atoll and are planned to be completed by the fourth quarter of fiscal year 2003. Closure is a first-time activity for the program and may result, I think, in a lot of new requirements. But the lessons we have learned at Johnston Island, both through the operation and the closure will be invaluable to the transfer of those ideas and methods to the continental United States disposal sites.

Mr. Chairman, I could go on with the statement. You have most of it. I would rather save the committee's time and not go through most of this information, which you have, and allow the members to ask the questions. I can tell you that I have spoken with the Secretary and with the current folks that are in the Under Secretary of Defense's position. The Senate will be looking at confirmation of a new Under Secretary of Defense for Acquisition, Technology and Logistics in the next few days. Pending that nomination, I intend to work with whoever the Senate confirms to that position and make sure that we address your questions and your issues adequately.

PREPARED STATEMENT

But I will end there. I would rather not take your time with repeating what is in the statement.

[The statement follows:]

PREPARED STATEMENT OF DR. JOSEPH WESTPHAL

Mr. Chairman and Members of the Committee: It is an honor and a pleasure to testify before you here today on the state of our Chemical Demilitarization Program. Our panel is comprised of Mr. James Bacon, the Program Manager for Chemical Demilitarization, and Mr. Michael Parker, the Program Manager for Assembled Chemical Weapons Assessment, and myself. We will tell you where the program is today, and where we will be going in the future.

I would like to begin by highlighting some of the successes that we have made to date. The Chemical Demilitarization Program, as you know, is a top priority, not only for our nation and its military, but for the global community of which the United States is a part. The principal functions that this program was founded to

perform have the historic end goal of not only reducing, but eliminating the United States' chemical weapons inventory consistent with an international treaty obligation—the Chemical Weapons Convention. Of course, that is no small task. However, we believe that this is an important, beneficial and absolutely necessary program which will help destroy weapons of mass destruction as well as helping to ensure a clean and safe environment for Americans and their allies.

One of our proudest recent milestones is the completion of our mission at the Johnston Atoll Chemical Agent Disposal System (JACADS). The JACADS site has been disposing of stockpiled chemical weapons safely for over a decade, and on November 29, 2000, the facility completed its final mission, the elimination of its stockpile of VX nerve agent. The JACADS mission has, to date, accomplished the destruction of 2,031 tons of agents. That's more than six percent of the entire United States chemical stockpile and includes the chemical munitions relocated from Germany to Johnston Atoll in 1990. For the first time in the history of the Chemical Demilitarization Program, an entire U.S. chemical stockpile storage location will be free of chemical weapons. Since the disposal operations at Johnston Atoll are complete, closure activities for that facility are currently underway that we expect to complete in September 2003.

The closure of our first full-scale prototype facility at Johnston Atoll marks a profound turning point in our program. At the same time, I am pleased to report to you that construction of new facilities at Anniston, Alabama, and Umatilla, Oregon, is nearly complete. Work on the facilities is continuing steadily, and we do not anticipate any significant delays or problems. We are on schedule to begin operations at these sites during fiscal year 2002. We are also making progress in our work on our facilities at Pine Bluff, Arkansas, Aberdeen Proving Ground, Maryland, and Newport, Indiana. In addition, we have begun the National Environmental Policy Act (NEPA) documentation process to support technology decisions for the Pueblo, Colorado, and Blue Grass, Kentucky, sites. These decisions will be made by the Defense Acquisition Executive in the first quarter of fiscal year 2002 for Pueblo and the third quarter of fiscal year of 2002 for Blue Grass. Our new facilities will continue the process of Chemical Demilitarization in the new millennium with the same concern for safety and environmental preservation that made our mission at Johnston Atoll so successful.

Further, safe and effective destruction operations continue at our Tooele, Utah, facility—our largest stockpile site. Since August 1996, over 10 million pounds of agent have been destroyed at the Tooele facility, and these operations are scheduled to be completed in 2004.

We look forward to answering any questions that you may have about this vital program.

DESCRIPTION OF THE CHEMICAL DEMILITARIZATION PROGRAM

Public Law 99–145, as amended, designated the Army as the Department of Defense's Executive Agent in charge of destroying our nation's chemical weapons. As such, the Army's Program Manager for Chemical Demilitarization (PMCD) is the primary entity with the obligation of designing and operating state-of-the-art chemical weapons disposal facilities that will allow our nation to meet international treaty obligations by April 2007. Along with reducing the risk of proliferation of weapons of mass destruction, the Army continually seeks ways to reduce the risk to military and civilian families living near the storage sites by ensuring these aging weapons are safely destroyed in an environmentally sound manner as efficiently as possible. This is a top priority. The Army also is spending approximately $120 million per year to safeguard the storage of chemical weapons.

As Program Manager, Mr. Bacon is directly responsible for the Chemical Stockpile Disposal Project, the Alternative Technologies and Approaches Project, and the Non-Stockpile Chemical Materiel Product. The United States' stockpile of chemical agents and munitions is stored at eight sites within the continental United States. To date, we have safely destroyed a combined total of over 7,000 tons of chemical agent at the Johnston Island and Tooele facilities.

The Alternative Technologies and Approaches Project is an aggressive research, development, test and evaluation program that began in 1994 to pilot test chemically neutralizing the bulk mustard agent, stored at Aberdeen Proving Ground and the bulk nerve agent VX stored at Newport Chemical Depot. This program is focused on these two sites because each site has only one type of chemical agent stored in large steel containers (hence the term "bulk"), and because there are no assembled chemical weapons in these stockpiles.

The Non-Stockpile program's mission is to safely dispose of all former chemical warfare production facilities and recovered and miscellaneous chemical warfare materiel that is not part of the stockpile.

TECHNOLOGY APPROACH

Baseline incineration is the only tried and successfully proven chemical weapons disposal technology to date, and the PMCD has employed that technology at two operational sites and is constructing additional facilities at three other locations. At our Johnston Island facility, the incineration technology successfully and safely destroyed over 2,000 tons of chemical agent, including over 400,000 munitions and bulk agent containers, while meeting stringent Resource Conservation and Recovery Act requirements and permitting conditions. Johnston Island is the first facility to complete its mission, destroying its entire stockpile of agent. To date, our facility in Tooele has destroyed approximately 5,000 tons of chemical agent, including 795,285 munitions and bulk agent containers.

Alternative, non-incineration technologies are actively being researched and developed for pilot testing at Aberdeen Proving Ground and Newport to support the disposal of the bulk only stockpiles. Under a separate Department of Defense program, the Assembled Chemical Weapons Assessment (ACWA) program, additional alternative technologies are also being examined for potential pilot testing. Mr. Parker, the ACWA Program Manager, will provide you with information regarding this program and testify here as well.

ACCOMPLISHMENTS AND PRIORITIES

The United States originally maintained 31,496 tons of chemical agent at nine storage sites. To date, we have destroyed over 22 percent of the original tonnage while 90 percent of the total original stockpile is under contract for destruction. The program continues to meet or exceed requirements of the Chemical Weapons Convention (CWC). By April 29, 2000, we were required to have destroyed one percent of our Category 1 chemical weapons that were declared at the time of the treaty's entry into force. By that time, we had well exceeded that milestone, having destroyed over 15 percent of those weapons. We will pass the next significant CWC milestone ahead of schedule, which requires that we have 20 percent of Category 1 chemical weapons destroyed by April 29, 2002.

The greatest accomplishment of the program, by far, is the reduction of risk to the public, the workforce, and the environment by destroying the chemical agents. It continues to be a reality that the ongoing storage of chemical weapons remains the greatest risk to local communities residing near stockpiles. Every day we operate a disposal facility we are safely, effectively, and significantly reducing this risk.

Our priorities for fiscal years 2001 and 2002 include maintaining the momentum we have achieved and continuing to make progress at each of the chemical stockpile sites under construction or in operation. Of critical importance are the selection of disposal technologies for the Pueblo and Blue Grass locations and the acquiring of funding necessary to begin demilitarization activities at those sites.

We are supporting a Defense Acquisition Executive review of several aspects of the Chemical Demilitarization Program, including our compliance with the CWC; life cycle cost and schedule estimates; program plans for the closure of chemical agent disposal facilities; and the path forward to implement disposal technologies at Pueblo and Blue Grass. The review is scheduled to be completed during the first quarter of fiscal year 2002. In addition to the Defense Acquisition Executive review, we are also supporting the completion of Congressionally directed studies of the Chemical Demilitarization Program, including an assessment of the feasibility and advisability of using stockpile facilities for disposal of non-stockpile materiel. Each of these assessments has the potential to drastically change the scope of the program and the funding requirements necessary to execute the chemical demilitarization mission.

PROGRAM STATUS

As stated above, maintaining momentum in our program is vital to the safety of our communities and to meeting our international treaty obligations. We have made tremendous progress in the safe destruction of chemical agents and munitions in an environmentally sound manner while continually addressing the challenges that such an endeavor brings. Our results are significant, and so are our obstacles. The following is a brief description of the status of our programs as we follow the critical path necessary to make our communities safe and to meet our international treaty obligations:

Status of the Chemical Stockpile Disposal Project

Johnston Island

Johnston Island, located 825 miles southwest of Hawaii, is the home of the world's first full-scale facility, operated by the Washington Demilitarization Company (formerly Raytheon Demilitarization Company), and designed specifically for the disposal of chemical agents and weapons. The Johnston Atoll Chemical Agent Disposal System (JACADS) was constructed by the Pacific Dredging Company in 1985. During its operational phase JACADS, destroyed 2,031 tons of chemical agents. In November 2000, JACADS successfully and safely destroyed the last chemical munition in the Johnston Island stockpile, a major milestone in the history of chemical demilitarization. Closure activities began in January 2001 and are planned to be completed by the fourth quarter of fiscal year 2003. Closure is a first time activity for the program and may result in new requirements. The lessons we learn at Johnston Island, both through operations and closure, have been and will continue to be transferred to our continental United States disposal sites.

Tooele, Utah

The Deseret Chemical Depot, located 22 miles south of Tooele, Utah, stores the nation's largest stockpile of chemical weapons (13,616 tons of chemical agent. EG&G began construction of the Tooele Chemical Agent Disposal Facility in September 1989 and disposal operations began in August 1996. To date, Tooele has safely and effectively destroyed approximately 5,000 tons of the chemical agent GB. To put this significant achievement into perspective, the amount of agent destroyed at Tooele is greater than the amount of agent that is stored at any one of the remaining stockpile sites around the country. Closure operations at the facility are scheduled to begin in the fourth quarter of fiscal year 2004. It is important to note that all GB agent munitions will be destroyed during this calendar year.

Umatilla, Oregon

The Umatilla Chemical Agent Disposal Facility, located at the Umatilla Chemical Depot, is approximately seven miles west of Hermiston, Oregon, just south of the Washington/Oregon state line. This facility will dispose of 3,717 tons of our nation's original stockpile of chemical agent. Washington Demilitarization Company (formerly Raytheon Demilitarization Company) began construction of the facility in June 1997. Construction is 92 percent complete and is expected to be completed during the third quarter of fiscal year 2001. Disposal operations are scheduled to begin in the fourth quarter of fiscal year 2002 and be completed in the first quarter of fiscal year 2006.

Anniston, Alabama

The Anniston Army Depot, located 50 miles east of Birmingham, Alabama, and eight miles west of Anniston, stores 2,254 tons of our nation's original stockpile of chemical agents. Washington Demilitarization Company (formerly Westinghouse Company/CBS) began construction of the Anniston Chemical Agent Disposal Facility in June 1997. Construction is 98 percent complete and will be completed in third quarter of fiscal year 2001. Disposal operations are scheduled to begin in the third quarter of fiscal year 2002 and be completed in the second quarter of fiscal year 2006.

Pine Bluff, Arkansas

The Pine Bluff Chemical Agent Disposal Facility, located at the Pine Bluff Arsenal, is 35 miles southeast of Little Rock, Arkansas. The facility will dispose of 3,850 tons of our nation's original stockpile of chemical agent. Groundbreaking at the facility was held in February 1999, and construction by the Washington Demilitarization Company (formerly Raytheon Demilitarization Company) is now 45 percent complete. Disposal operations are scheduled to begin in the fourth quarter of fiscal year 2003 and end in the first quarter of fiscal year 2007.

Status of the Alternative Technologies and Approaches Project

Newport, Indiana

The Newport Chemical Depot, located two miles south of Newport and 32 miles north of Terre Haute in western Indiana, stores 1,269 tons of the nerve agent VX in 1,690 steel containers, commonly called ton containers. Groundbreaking at the Newport Chemical Agent Disposal Facility was held in April 2000 and Parsons Infrastructure is scheduled to begin pilot testing in the third quarter of fiscal year 2004 to pilot test VX neutralization followed by super critical water oxidation as the disposal technology. Upon verification of this technology being successful in the pilot

stage, full-scale operations should begin in the first quarter of fiscal year 2005 and be completed in the fourth quarter of fiscal year 2005.

Aberdeen Proving Ground, Maryland

The Edgewood Chemical Activity of the Aberdeen Proving Ground, located approximately 20 miles north east of Baltimore stores 1,623 tons of mustard agent, also known as HD, in 1,817 ton containers. Bechtel National, Incorporated, began construction of the Aberdeen Chemical Agent Disposal Facility in July 2000. The pilot testing of a neutralization process followed by biodegradation to destroy the mustard agent is scheduled to begin in the third quarter of fiscal year 2004. Upon successful completion of the pilot testing to verify that the neutralization process is capable of full-scale disposal of the chemical agent, full-scale operations should begin in the second quarter of fiscal year 2005, and end in the second quarter of fiscal year 2006.

Status of the Pueblo, Colorado, and Blue Grass, Kentucky, Sites

Pueblo, Colorado

The Pueblo Chemical Depot has 780,078 munitions with about 2,611 tons of chemical agent. Significant demilitarization activities at the depot had been on-hold pending the results of the congressionally mandated ACWA program. This assessment required the evaluation of at least two alternate technologies to incineration for the disposal of assembled chemical munitions. This assessment is now complete.

Both PMCD and ACWA are supporting the environmental evaluation and review process. In November 1999, an environmental Working Integrated Product Team (WIPT) was formed for the Pueblo project to work with the state of Colorado to expedite planning, development and implementation of all aspects of the environmental permitting process for a chemical agent disposal facility in Pueblo. The WIPT continues to meet regularly with the state. The PMCD and ACWA have also begun the NEPA process to support a technology decision. Completion of the NEPA process and the technology decision are scheduled to be made in the first quarter of fiscal year 2002 with a systems contract award expected in the second quarter of fiscal year 2002. Infrastructure projects for upgrade of roads, utilities and communications systems are scheduled for award this summer.

Blue Grass, Kentucky

The Blue Grass Army Depot, located in central Kentucky, stores 523 tons of our nation's original stockpile of chemical agents. As with Pueblo, significant demilitarization activities have been on hold pending the results of the ACWA program.

An Environmental WIPT was formed in January 2001 for the Blue Grass project. The purpose of the WIPT is to facilitate and expedite the permitting process for the safe elimination of chemical weapons stored at Blue Grass Army Depot. As required by NEPA, preparation of an environmental impact statement (EIS) has begun. Two technologies will be addressed in the EIS. These technologies are baseline incineration, and the ACWA technology of neutralization followed by super critical water oxidation. Additional ACWA technologies will be considered in the EIS if they are ultimately deemed reasonable alternatives. Completion of the NEPA process and the technology decision are scheduled to be made in the third quarter of fiscal year 2002.

Status of the Non-Stockpile Chemical Materiel Destruction

Destruction of the non-stockpile chemical materiel covered by the CWC must also adhere to the terms of the Convention. The Product Manager is responsible for the safe disposal of binary chemical weapons, former chemical weapons production facilities, buried and recovered chemical warfare materiel, and miscellaneous hardware and chemical warfare components. The Army continues to research, develop and deploy several neutralization-based technology mobile treatment systems for the disposal of non-stockpile materiel, including the Mobile Munitions Assessment System, the Rapid Response System, and the Explosive Destruction System.

In December 2000, the program's Explosive Destruction System arrived at Rocky Mountain Arsenal, Colorado, and safely destroyed recovered bomblets containing GB. Due to the success of the Explosive Destruction System, the Program Manager decided to end the development of the Munitions Management Device–1. Termination of the Munitions Management Device–1 test will result in fiscal year 2001 cost savings to the program of approximately $5 million. Funds in this amount are being transferred to the Alternative Technologies and Approaches Project to cover emerging program requirements.

SAFETY

Disposing of lethal chemical agent and munitions is one of the most complex missions undertaken in either the public or private sector. Multiple configurations of munitions and energetics, along with varying types of chemical agent demand that we take the utmost safety precautions in the storage and destruction of these weapons. Throughout this process, we are totally committed to worker safety, protecting the health of the citizens in the communities in which we operate, and an overall respect for the environment. The PMCD actively works with the EPA, relevant state environmental and health regulatory agencies, as well as the Centers for Disease Control and Prevention to ensure worker and community health and safety and full protection of the environment. As the program continues its mission, a priority is maintaining a culture of safety and sharing lessons learned from operating facilities to those facilities about to enter into operation.

MEETING AND EXCEEDING ENVIRONMENTAL AND REGULATORY REQUIREMENTS

Planning, constructing, operating, and ultimately closing disposal facilities at nine different sites requires that the PMCD meet or exceed local, state, and national regulatory requirements for protecting human health and the environment. This requirement is both costly and time consuming; however, meeting or exceeding standards is critical for building partnerships in the communities where our facilities are located. As science and public policy concerns evolve, we are faced with increasing oversight requirements, which we fully accept for the protection of the public, our workers, and the environment. Because we have strong working relationships with state and local regulatory agencies, we cooperatively ensure that all obligations are met. For example, Oregon recently reclassified all munitions in storage as hazardous waste, and such a change will require the Army to change the way we work with state agencies. This reclassification will result in increased regulatory compliance costs for the Army.

On the federal and state levels, the program continues to meet environmental regulatory and permitting requirements. Also, since the 1960's, the Army has worked with the National Research Council, whose members are some of our nation's most distinguished scientists and engineers, to review and ensure our practices and procedures are sound.

MANAGING UNIDENTIFIED FACILITY CLOSURE ISSUES AND ENVIRONMENTAL COSTS

The legacy of chemical weapons production, testing, storage, and disposal will not be eliminated overnight. As the chemical weapons disposal process ends at our facilities like JACADS, we are entering uncharted territory relating to requirements and closure costs. As we work through the process at JACADS, we will learn a great deal about ultimate closure costs, schedules and processes that will be shared with our other facilities.

PARTNERING WITH OUR COMMUNITIES

Public confidence and acceptance of the program is vital to the successful planning, construction, operation and closure of our facilities. The PMCD partners with citizens' advisory commissions in each stockpile state, with the Federal Emergency Management Agency (FEMA), and state and local emergency response agencies to ensure the public is adequately informed about the risks associated with the stockpile and our disposal operations. We take every opportunity to work with our state and local partners and communities to engage and inform local citizens by maintaining public outreach offices in all of the stockpile communities.

The Chemical Stockpile Emergency Preparedness Program protects public health and safety in ten states from the risks of chemical stockpile storage and disposal operations. This program ensures that Army installations and state and local governments are prepared to respond to an accident involving the chemical stockpile. All eight Army installations that store chemical agents and munitions are prepared to respond to such an accident.

The Army shares responsibility for managing this program with FEMA. FEMA is responsible for assisting state and local governments in developing their emergency response capabilities. The Army supports this effort by providing funding and technical assistance. The Chemical Stockpile Emergency Preparedness Program has enhanced emergency response capabilities in each of the ten states affected by the Chemical Demilitarization Program.

MAINTAINING FUNDING NECESSARY TO FULFILL MISSION

The PMCD has achieved a number of milestones and is clearly a world leader in chemical weapons disposal technology and processes. Meeting the CWC obligations and building upon our successes is a top priority, one which will require full financial support. The program has begun closure activities at the Johnston Island facility and will begin operations in the near term, at new facilities in Anniston and Umatilla. In addition, we expect the Department of Defense to determine, in the near term, the technology path forward for the Pueblo and Blue Grass sites.

CHALLENGES

The chemical demilitarization mission is a large and complex undertaking, constantly breaking new ground and meeting new technological, economic and political challenges. The Army's continuing destruction of our chemical weapons stockpile already has reduced risks to the public, the workforce and the environment. Risks from these lethal weapons will continue to decrease as new destruction operations (most of which are already under construction) come on line. Despite these achievements, the Army faces a number of significant challenges as we move forward with existing and planned operations to meet requirements of public law and the CWC. It is imperative that we maintain momentum and the full funding necessary to see the projects mature through the systemization, operations and closure phases. We must determine a technology path forward for Pueblo and Blue Grass, using sound science and frank dialogue, so we can proceed with the destruction of those stockpiles. Personnel retention issues, including the maintenance of the right skills mixture for government and contractor employees, must be successfully addressed for these relatively short duration projects. We must successfully manage the degradation of the stockpiles, which is an ongoing issue as the weapons deteriorate with age, so we can continue to minimize risk to the workers and the public. Finally, developing and achieving approved closure standards, working with the various stakeholders at all of our sites, to include state and local governments, continues to be a key program objective.

CONCLUSION

For over 20 years, the safety record of the thousands of men and women involved in the destruction of chemical weapons is remarkable. No member of the public has ever been exposed to a chemical agent during operations of our disposal facilities. We are meeting our CWC obligations while fulfilling our commitment to safety—to our workers, our communities and our environment. Indeed, we are truly making chemical weapons history.

As we proceed toward our goal, we are constantly aware of the public's intense interest in this program and encourage their participation. We have and will continue to work closely with the established citizens' advisory commissions and our local communities. We are committed to forthright, open and responsive communications with all of our stakeholders. In our endeavors, we will never forget that safety and protection of the environment are our first priorities. Our obligation to our workers, our families, the communities and our nation is too great not to fully commit to safety as the program's paramount consideration. To accomplish our mutual goal, the focus must now be placed on staying the course and completing the mission of disposing of chemical warfare materiel using proven disposal technologies which are protective of human health and the environment and supportive of our international treaty obligations.

In closing, Mr. Chairman, we ask for your support and this committee's support, which will demonstrate our commitment to both the communities surrounding our storage sites and our international partners. Thank you for the opportunity to present this statement to the Committee. We look forward to responding to your questions.

PROGRAM COSTS

Senator STEVENS. Well, Dr. Westphal, we are very pleased that you are where you are now, because I think this program needs some attention. I am told that this program so far has cost $6.2 billion. I am getting used to big numbers this morning because I have just left the Commerce Committee, where we were talking about the Big Dig. The Big Dig was estimated to cost $2.4 billion. It has

so far cost over $13 billion and it is not completed yet. You know, that is the tunnel under the Charles River up in Massachusetts.

Now, this one I understand has spent $6.2 billion and the estimate for the total life cycle cost as I understand it is $14.1 billion, as Senator McConnell has said. The estimate, however, has been changing each year.

How reliable is this estimate now, Joe?

Dr. WESTPHAL. I think it is pretty reliable. But there is an ongoing review of a new cost estimate for the future that is under way and will be ready some time in the fall. I do not know what that will tell us, but I think that we need to take into account the recommendations that you will make in this committee in decisions that we want to implement to maximize economic efficiency in order to assure that we either maintain the cost cycle where it is or reduce it if we can and at the same time apply whatever safety and useful technologies that are out there to make sure that we absolutely take care of people and their communities.

OPENING STATEMENTS OF MESSRS. BACON AND PARKER

Senator STEVENS. Now, Mr. Bacon and Mr. Parker, before I ask you questions, did you have any statement you wish to make this morning? Mr. Bacon?

Mr. BACON. Sir, my statement is incorporated with the Secretary's. But I do say that we are totally committed to giving this program its required attention. It is a top priority program. We take safety and environmental protection very seriously. We take all issues and concerns raised very seriously and are committed to meet our national obligation to the Chemical Weapons Convention.

Senator STEVENS. Thank you.

Mr. Parker.

Mr. PARKER. Thank you, Mr. Chairman.

I would just like to acknowledge the subcommittee's support to the search for alternative technologies and especially Senator McConnell's support in resourcing this critical program. We are fundamentally complete in the demonstration phase of alternative technologies and, as Dr. Westphal outlined, those decisions and how they affect especially the Pueblo and Blue Grass sites, will be subject to a decision this fall.

[The statement follows:]

PREPARED STATEMENT OF MIKE PARKER

Thank you for this opportunity to update you on the accomplishments of the Assembled Chemical Weapons Assessment program in successfully identifying alternatives to incineration. I appreciate the committee's support for this program, and will give you a status of the program and accomplishments to date.

The Assembled Chemical Weapons Assessment (ACWA) program was initiated under the Omnibus Consolidated Appropriations Act, 1997 (Public Law 104–208). As directed within that Public Law, we the Department of Defense, Industry, Federal, State and local leaders as well as affected community members have formed an interactive partnership to identify and demonstrate alternative technologies to the baseline incineration process for the demilitarization of assembled chemical weapons.

Congressional direction was based on strong constituent concerns over the health and safety of incineration. In order to address these concerns and define the criteria for an acceptable alternative, public involvement initiatives were set in place to build and maintain a transparent program. The Keystone Center, a neutral third party, was utilized as the facilitator to help build a program based on trust among

the stakeholders in reaching consensus of acceptable alternate technologies. The stakeholders have coalesced into a working body, the Dialogue, where full public involvement is the operating principle. The Dialogue consists of a diverse group of affected stakeholders to include: DOD staff, EPA staff, State regulators, tribal government representatives, citizens from the stockpile communities (both pro and anti incineration proponents), and national interest groups. Technology providers from the commercial sector and members of the National Research Council panel overseeing the ACWA program for the Congress have also participated fully in the Dialogue process. Public involvement is the cornerstone of the ACWA program through the process established within this Dialogue group. All aspects of Technical, Environmental, and Contractual efforts within the program have been accomplished with Dialogue involvement and input.

The ACWA team, which consists of technical, environmental, contractual, and legal experts, in conjunction with the Dialogue, developed several levels of criteria that were used to evaluate the proposed alternative technologies. Industry representatives observed this criteria and evaluations development process as well as participated in a two-day pre-solicitation conference in June 1997 to assure that industry understood the objectives of the program. A Request for Proposal was then published on July 28, 1997. The ACWA program received thirteen original proposals. Utilizing the established criteria, six proposals were ultimately found to warrant demonstration testing within the program. Due to funding constraints, only three technologies were demonstrated during 1999. These technologies were Burns and Roe (Plasma Arc), General Atomics (Neutralization/Supercritical Water Oxidation), and Parsons/Honeywell (Neutralization/Biotreatment). The evaluation of these demonstrations concluded that the Neutralization/Supercritical Water Oxidation and Neutralization/Biotreatment technologies are viable to go to pilot testing as stated in the ACWA Supplemental Report to Congress in September 1999.

Upon receipt of fiscal year 2000 funding, the three remaining technologies were demonstrated. These final three technologies demonstrated were AEA Technology (Electrochemical Oxidation), Foster Wheeler/Eco Logic (Neutralization/Supercritical Water Oxidation/Gas Phase Chemical Reduction), and Teledyne Commodore (Solvated Electron Technology). The evaluation of these demonstrations concluded that the Electrochemical Oxidation and Neutralization/Supercritical Water Oxidation/Gas Phase Chemical Reduction technologies are viable to go to pilot testing. The basis of these conclusions will be presented in the next ACWA Supplemental Report to Congress.

The Strom Thurmond National Defense Authorization Act for Fiscal Year 1999 (Public Law 105–261) directed the ACWA Program to begin preparations for the potential implementation of viable alternative technologies via pilot testing activities. Environmental, acquisition and budget planning requirements were set in motion to accommodate the implementation of an alternative technology. Also contained within Public Law 105–261 is the requirement for the DOD to certify to Congress that prior to implementing an alternative that the alternative technology approach is: as safe and cost effective as incineration; is capable of completing the destruction of such munitions on or before incineration; and is able to satisfy Federal and State environmental and safety laws applicable to the technology.

To ensure success regarding the possible implementation of an alternative technology, Engineering Design Studies have been initiated for all successfully demonstrated technologies. The goals associated with the Engineering Design Studies are to complete a design package that would enable industry to complete and implement a pilot facility at a designated site and to provide cost and schedule estimates necessary for certification per Public Law 105–261. Also, the Engineering Design Packages will enable the Program Manager to develop a meaningful and complete Resource Conservation and Recovery Act permit application, which is required prior to constructing a pilot facility. It is important to note that throughout the entire ACWA program, the Dialogue has been kept involved and has had continual opportunity to present their views and concerns prior to major decision milestones.

Currently, the ACWA program is participating in the Defense Acquisition Executive (DAE) Review. Various ACWA team members are co-chairing Integrated Process Teams (IPT) developed to establish, through advice to the senior leadership and the ultimate decision maker, the eventual path forward for the ultimate destruction of the Colorado and Kentucky chemical weapon stockpiles. The IPTs will make recommendations regarding the certification of an alternate technology per Public Law 105–261. All available information developed throughout the program, including cost, schedule, technical data, and environmental analysis will be considered in the DAE review process. We expect a technology decision by the DAE for Pueblo, CO in the 1st Quarter of fiscal year 2002 and for Blue Grass, KY in the 3rd Quarter of fiscal year 2002.

As I previously stated in the 1997 ACWA Annual Report to Congress, "it has been my belief, now validated by experience, that establishing and promoting a cooperative working relationship and understanding between a broad spectrum of stakeholders can and will yield positive results. Rather than giving up authority, I have found that involving the public in the decision making process is a powerful tool for increasing the authority and legitimacy of the ultimate decisions".

Thank you for your support and interest in this vital program.

PROGRAM COST GROWTH

Senator STEVENS. Mr. Bacon, what factors have led to this cost growth in the recent years?

Mr. BACON. Sir, the costs have changed over the years, as you mentioned in an earlier statement, I believe the $2 billion estimate was based on mid-1980's requirements. The stockpile at that time to be destroyed was M–55 nerve agent rockets. Scopes have increased over the period as the total stockpile was included in the program bringing new rules and regulations on environmental compliance, and bringing in the CSEPP program.

All these are necessary parts for safe disposal. Also, the Non-Stockpile Chemical Materiel Project was added, i.e., former production facilities and binary weapons. These scope changes have led to cost increases. In addition, it is a very complex job, dealing with something that is as lethal as chemical agents, making sure that we place absolute priority on safety and environmental protection.

In a nutshell, those are the issues that relate to the cost changes from those early days of the estimate.

ENVIRONMENTAL PROTECTION AGENCY REGULATIONS

Senator STEVENS. Have there been changes in the regulations of the Environmental Protection Agency (EPA) that apply to your agency?

Mr. BACON. Yes, sir, there have.

Senator STEVENS. When were those changes made?

Mr. BACON. Sir, there were major changes in the late 1980's with the Resource Conservation and Recovery Act passage, assuring the rules that apply to destruction processes, wastes, secondary wastes, and hazardous wastes are maintained within compliance. Also in the 1990's was the addition of the requirement to assure public health again, where health risk assessments, ecological risk assessments were added; new challenges coming with additional rules and maximum achievable control technology, the "MACT" rule as it is referred to, which has to do with hazardous waste combustors, a number of changes of that type.

I can take those for the record and give you a detailed outline of the rules changes.

Senator STEVENS. We would appreciate that detail for the record.

[The information follows:]

CHANGES IN REGULATIONS OF THE ENVIRONMENTAL PROTECTION AGENCY

The following changes in federal environmental laws and regulations have occurred since the beginning of the Chemical Demilitarization Program:

The Hazardous and Solid Waste Amendments of 1984 were a significant change to the Resource Conversation and Recovery Act (RCRA). It increased requirements on the handling and tracking of hazardous waste to include waste minimization requirements and a national land disposal ban program.

The Emergency Planning and Community Right to Know Act (EPCRA) was enacted in October 1986. The Act increased notification and coordination requirements

of a facility with state and local emergency planning entities. It also added reporting requirements of inventories and environmental releases of potentially hazardous chemical substances.

The Clean Water Act Amendment of 1990 increased requirements for storm water management and reporting.

The Pollution Prevention Act of 1990 required facilities to implement source reduction and recycling activities. Facilities are then required to provide an annual report on these activities.

Clean Air Act Amendments of 1990 required new programs and made major changes to the way that air pollution is controlled in the United States. It emphasizes an incremental approach to achieving attainment of the national ambient air quality standards. Facilities must obtain permits, conduct monitoring, and add pollution controls, or change production processes to further reduce emissions.

Federal Facilities Compliance Act of 1992 ensured that there is a complete and unambiguous waiver of sovereign immunity with regards to the imposition of administrative and civil fines and penalties against federal facilities. This act allows state environmental agencies and the Environmental Protection Agency to impose civil penalties and administrative fines on federal facilities under RCRA for violations of federal, state, and local solid and hazardous waste laws.

Hazardous Waste Minimization and Combustion Strategy was announced in May 1993. The strategy required the performance of extensive human health and ecological risk assessments for any hazardous waste combustor prior to being permitted.

The Hazardous Waste Combustors Maximum Achievable Control Technology Rule was enacted in September 1999. It established technology based emission standards for hazardous air pollutants from hazardous waste combustors. Additionally, it added new facility testing requirements and stringent operator training requirements for hazardous waste combustors.

Executive Order 13148, "Greening the Government through Leadership in Environmental Management" was signed in April 2000. This Executive Order was issued to ensure that all necessary actions are taken to integrate environmental accountability in agency day-to-day decision-making and long-term planning processes, across all agency missions, activities, and functions. Pollution prevention is highlighted as a key aspect to the environmental management system process. In particular, the order requires agencies to implement compliance auditing programs and environmental management systems. It also establishes agency goals to reduce the use of particular toxic chemicals, reduce the emissions of toxic release inventory chemicals, and to use environmentally beneficial landscaping.

ENVIRONMENTAL IMPACT STATEMENTS

Senator STEVENS. How many environmental impact statements have you made in this process so far?

Mr. BACON. Sir, we have made a programmatic environmental impact statement for the total program and a subsequent record of decision by the Secretary of the Army in the late 1980's. We have also made a site-specific environmental impact statement for each and every destruction site, with the exception of the two which we still have to implement based on technology decisions. Those two are the Pueblo and Blue Grass sites.

In addition to the environmental impact statements, there are required assessments, records of consideration that are made and filed. Environmental impact studies, of course, involve extensive public input, public hearings, and review. It is a statutory process for the environmental permitting part of that. It is also public review of the impact statements themselves.

Senator STEVENS. This process has been going on since about 1985, has it not?

Mr. BACON. Yes, sir.

CHEMICAL WEAPONS DISPOSAL

Senator STEVENS. Mr. Parker, what is the projected cost now for disposing of the demilitarization facilities in and of themselves, just

the facilities? Do you have a projected cost for the disposal of facilities you are going to use, which will be obsolete when you finish the job?

Mr. PARKER. I think I would refer that question to Mr. Bacon. The alternative programs that I have been involved with have been really a technology demonstration program, Senator.

Senator STEVENS. I see. I apologize.

Mr. PARKER. Mr. Bacon has the facilities.

Mr. BACON. Senator, I will take that question. The closure of the facilities is another requirement included in the Resource Conservation Recovery Act (RCRA) permits. This is to assure that we meet all appropriate requirements to close facilities. Those requirements are very stringent. As you know, originally there was legislation that required these facilities be dismantled and allowed no future use. Those are the types of clean closure, where we thoroughly decontaminate the facilities of any agent or any hazardous wastes involved in the facilities and secure it so there is limited access.

The expected estimate at this time to completely close the Johnston Island facilities is over $400 million. That is a big ticket item. However, I have to point out that in that $400 million, a substantial component of that, probably 40 percent, relates to the remote location of Johnston Island, as opposed to what a stateside facility might cost.

Senator STEVENS. I thank you very much. I wanted to get some background here before I yield to my colleagues who have a direct involvement.

Senator Shelby.

CHEMICAL STOCKPILE EMERGENCY PREPAREDNESS PROGRAM (CSEPP)

Senator SHELBY. Thank you. Thank you, Mr. Chairman.

Mr. Bacon, some in the Anniston community in Alabama feel strongly that they have been both consistently and intentionally misled regarding risk, operational incidents, and public safety procedures associated with the chemical destruction program. A lot of us are concerned about the Army's policy regarding chemical exposure. Elected officials there and the general public, a lot of them in the Anniston community, have been told for years that the Army's objective was zero exposure. Has the Army changed its objective from zero exposure to zero fatalities and does the Army believe that people will be exposed to chemical agents?

What medical studies or data can you share with this committee regarding the long-term health impacts of non-lethal exposure to chemical agents?

Mr. BACON. Senator Shelby, most of that I believe supports the Chemical Stockpile Emergency Preparedness Program and the protection of the public in the unlikely event of a storage accident or some other consideration that would cause an agent release to the environment and the public. So Mr. Salter with FEMA will be addressing some of those issues related to the protection of the public sector.

The issues relating to misleading the public—sir, we are open. We share the information we have through our outreach centers and through the various citizens' advisory commission meetings.

We have no secrets in the program. We take those issues very seriously that the public has raised. We take each one of those and thoroughly evaluate them and make the maximum effort to assure that we are safely operating, that we are protecting the public and our workers.

Senator SHELBY. Mr. Parker, do you have any comments on that?

Mr. PARKER. From an alternate technology standpoint, the operation of the plants that would be based on an alternate technology would follow the same policies and procedures that would be established for any of the alternatives, including incineration. So Senator, in that regard the technology as far as how it would affect policy is really not an issue in how the CSEPP program would respond.

PROGRAM MANAGEMENT STRUCTURE

Senator SHELBY. Secretary Westphal, last spring the GAO detailed problems in the execution of the demilitarization program due to a complex management structure which hinder accountability. I believe that accountability is important, very important, especially where safety is involved. This is what we are getting at. Central to all of this is safety of the people.

What has the Army done to address these problems since the GAO study and what more can be done?

Dr. WESTPHAL. I think, given the complexity of the issue, obviously we have created a complex organizational system within the Department to address it. As we move forward with this program, and as the technologies get more complicated, and as the answers to some of the questions that you are raising become more complex, we need to address what the chairman said earlier in his statement, in which he talked about public involvement. You said greater stakeholder involvement, more transparency in terms of the program. All of these things need to be addressed.

I started asking questions about what are the lines of accountability and chain of command. We do have an existing chain of command that works. However, we need to make it clearer to the communities and the stakeholders what that chain of command really is.

Ultimately, the Secretary of the Army is the person responsible. The Assistant Secretary of the Army for Acquisition, Logistics and Technology is the acquisition executive, but reports to the Secretary of the Army. The Secretary of the Army, together with the Under Secretary of Defense for Acquisition, Technology and Logistics, should be able to work together with Defense acting as an oversight agency in looking at the program and assuring that it meets not only the Secretary of Defense's priorities in terms of funding and future outlays and all of that, but as well as coordination.

PUBLIC SAFETY

Senator SHELBY. This is an appropriations panel. We are very interested in funding, but we are very interested in the central issue and I think that is safety, safety of the people in the area, wherever it is, in my State of Alabama or elsewhere, who could be the victims of an accident or a technological failure of some kind.

So that is what we are getting at. We want the weapons destroyed because they are deteriorating. We all know that. But we have got to do it in a safe, the most technologically advanced way, and I think that is one of the central questions of a lot of the people in the Anniston area. They are not satisfied with the safety response and the information that you are giving them.

Dr. WESTPHAL. I think our absolute priority is, and would be in the future, safety. Cost is a major factor, as it always will be.

Senator SHELBY. Cost is a factor, but cost of losing lives, fatalities, is a heck of a consideration here, too; is it not?

Dr. WESTPHAL. Absolutely. For example, to address a point Senator McConnell made earlier, I said earlier to one of my colleagues in the Office of the Secretary that as we identify, as the environmental impacts are done on these two new plants, Blue Grass and the other—and I do not know if you have a time constraint.

Senator SHELBY. Go ahead.

Dr. WESTPHAL. But as they are identified, we want to use the best technology. We should use the best technology, the most advanced technology that provides the greatest protection for the communities involved.

ALTERNATIVE TECHNOLOGIES

Senator SHELBY. Well, that comes to my next question, then. Given the state of the program in Anniston, Alabama, does a faster, cheaper, and safer alternative exist to eliminate these weapons other than what you are proceeding with now?

Dr. WESTPHAL. We do not know as of today, as of this hearing, what that technology may be. We are in the process of trying to identify alternative technologies that may be faster, cheaper, more effective, and offer more protection. As we identify them, I intend to work with the Under Secretary of Defense to come to you, to the Congress, to the chairman of the Appropriations Committee and others on the authorizing side, to look at how we implement those technologies at a place like Anniston, where we already have built a specific disposal technology for use.

So if we think we have a better way to do it, we are not going to shy away from coming back to Anniston and looking at that. At least I do not believe that we should do that.

Senator SHELBY. Do you want to say something, Mr. Bacon?

SAFETY ASSESSMENT

Mr. BACON. Yes, sir. Senator Shelby, I would like to just back up just a minute in talking about safety, making sure that the public is protected and what those oversights are. Of course, we use the Centers for Disease Control as an independent assessor of public health. We use the National Research Council as an independent assessor of the operations, and of course the regulatory agencies, the states, as well as the EPA.

So we have independent bodies from time to time that we use to review safety assessments of the program, particularly operational phases, like at Tooele, Utah. So we do place the top priority on safety. Those independent bodies do in fact verify that our operations are safe and protective of public health and the environment.

Senator SHELBY. Well, I want to make sure as best I can as a member of the Senate and a member of this panel in funding these programs that the best technology issued, that our people, whether in my State of Alabama, Kentucky, Utah, or any other State, are not guinea pigs for the testing of some technology, because we cannot afford to make a mistake here with the use of this technology, or the software that runs it. Every part of this program is central, I believe, to the safety of the people in the Anniston area who are being asked to live with the impact of this program.

Mr. BACON. Yes, Senator, and that certainly is our philosophy, and that is applied continuously in the program in terms of every step or action that is taken. That kind of assessment is made.

Senator SHELBY. Well, why is the problem persisting in some of the communities if this would be so, what you are saying?

Mr. BACON. Well, sir, that is a good question, Senator Shelby, and we continuously work to improve the sharing of information. Gaining the credibility and the confidence of the people obviously is a major action to achieve, a necessary action that must be achieved, so that everyone, essentially, everyone is comfortable with the fact that we are protective of their health, that no action will be taken unless it is protective of their health.

We will continue that and continue to work harder and harder to improve that, getting the information out and sharing it with the public. As I said earlier, there are no secrets to the program. We try to be as open as we can, sharing all the information that we have. Each and every incident, you may notice was shared with the public.

Senator SHELBY. When you say sharing all the information you can, would not transparency be central to alleviating any fears that the people would have? Assuming that you have the best technology, if you show them that you have the best technology, that you are dotting every i and crossing every t for safety, would that not be very important, to hold back nothing?

Mr. BACON. Certainly. We do not hold back anything. Maybe I misspoke when I said sharing what we can. I did not mean there was any limits to it.

Senator SHELBY. Sharing everything?

Mr. BACON. Sharing everything, certainly.

Senator SHELBY. Mr. Chairman, thank you for your indulgence.

Senator STEVENS. Yes, sir.

Senator McConnell.

Senator MCCONNELL. Thank you, Mr. Chairman.

DESTRUCTION SCHEDULES AND PROJECTIONS

Mr. Bacon, is it your testimony that all stockpile sites with the exception of Colorado and Kentucky will complete operations in compliance with the 2007 convention deadline?

Mr. BACON. Sir, consistent with application of safety and environmental protection, that is our next priority, and we are focused on meeting the Chemical Weapons Convention date. But more importantly——

Senator MCCONNELL. Is that a yes or a no?

Mr. BACON. That is a yes, we are focused on meeting that treaty compliance date, yes, sir.

Senator MCCONNELL. What is the projected schedule for destruction of the stockpile in Kentucky if you use the method of incineration?

Mr. BACON. Sir, the projected date would be based on when we are able to start facility construction, permitting actions based on technology decisions that the Under Secretary of Defense would make next year and provide those to the Congress. We are looking at 6 to 7 years to construct the facility and complete the operations. So we are talking about 2007, very close to the treaty deadline.

Senator MCCONNELL. You are saying that if you use incineration in Kentucky, the project would be begun or completed by 2007?

Mr. BACON. I am saying that we would be very tight, but we have a chance to complete it by that time. The variables in there, of course, are the construction—the permits, I should say, the environmental permits, receipt of permits, to allow construction of the facilities. We have 523 tons of stockpile there. There are over 60,000 nerve agent rockets. But we would tailor the facility specifically to the stockpile at that site.

Senator MCCONNELL. Mr. Parker, if we were to use an alternative to incineration, what would be the time line?

Mr. PARKER. Senator, as we reported in the ACWA annual update to the Senate, we used a very conservative estimating technique at the end of the demonstration and we had come up with an approximate mid-2011 date for Blue Grass. We are in the process of updating those estimates based on some continued effort under what we call engineering design studies.

The commercial contractors who have completed the design, the preliminary design for a Blue Grass facility, have come in to us with an estimate of a 2008 to 2009 time frame. We are in the process of scrubbing that down and it will be subject to the defense acquisition review that Secretary Westphal mentioned as the independent assessment of that date.

I want to stress that, because of the history of the program and direction from or advice from this committee's professional staff, first Mr. Kimmitt and now Mr. Hawkins, that we used very conservative estimating techniques in putting those dates together. So those are relatively high confidence dates.

Senator MCCONNELL. So we are looking at a delay of a few years at least if we use an alternate disposal approach; is that what I am hearing here, listening to you and Mr. Bacon?

Mr. PARKER. On the simple arithmetic, yes. The estimating base for the two numbers is going to be reconciled by this Defense Acquisition Executive review so that we have a common baseline of comparing, a common level of confidence and risk.

Senator MCCONNELL. Given the condition of the material there, does that involve any risk, the delay, if we ended up picking an alternate method of disposal?

Mr. PARKER. Senator, as to the stability of the stockpile, the recently completed assessment is that the stockpile in and of itself, while it is old, is stable. I think about 2040 was the estimate of the time to expect any kind of deterioration with the M–55 rockets, which are the most problematic item.

That is from a storage stability standpoint. The forcing function that could result in an event in storage would be an external event,

a lightning strike, a tornado, or that type of an event. If you look at the risk associated with storage, it is a very small number, but it is slightly higher than the risks that would be associated with proceeding with onsite disposal, whether that is an incineration-based technology or for that matter an alternate technology.

DESTRUCTION SCHEDULES AND PROJECTIONS

Senator MCCONNELL. Well, if incineration is chosen, Mr. Bacon, it is your testimony that the facility would be constructed and the incineration completed by 2007? Is that what I heard?

Mr. BACON. Sir, the key variables in there are of course the permitting, the time it would take for the permitting. That is a schedule risk. But we believe that we can complete it by 2007, but that means that we have to make a decision this fall through the DAE, Defense Acquisition Executive review process, and then immediately go into preparing the permit applications and the permit so that we can start construction.

We would be in a position to start infrastructure upgrades that are necessary there during this next year.

Senator MCCONNELL. So Mr. Parker, do you know enough, having looked at these alternate technologies, even though you have not completed the study, do you know enough about them to know, once that is begun, how long it would take to finish? You are saying we would finish up in 2010 and 2011 if we used one of these alternate technologies; did I hear that correctly?

Mr. PARKER. Based on the most recent input from the commercial contractors who have now completed a preliminary design, and we are looking at the 2008, 2009 time frame for Blue Grass, based on their estimates.

Senator MCCONNELL. To start or to finish?

Mr. PARKER. That is completion of the total effort. I should have noted earlier that the completion for the purposes of compliance with the Chemical Weapons Convention would be 6 to 12 months before that date, differentiating between destruction of the agent as required under the treaty and then completion of all of the so-called secondary wastes. So that the 2008–2009 date would be completion of the total job.

Senator MCCONNELL. So the difference in the delay, then, between one approach versus the other is only a year or two? Is that what we are talking about here?

CONSTRUCTION COSTS

Mr. BACON. It is certainly in that time frame, Senator.

Senator MCCONNELL. Now let us look at costs. In 1986 the Army testified that the incineration construction, facility construction, would cost $38 million and the entire stockpile would be eliminated in 1 year. What is the current estimated cost of construction for incineration?

Mr. BACON. Senator McConnell, would you rephrase that question, sir?

Senator MCCONNELL. In 1986 the Army said construction, presumably of an incineration facility, would cost $38 million and the entire stockpile would be eliminated in 1 year. What is your testimony today?

Mr. BACON. Okay, sir. Obviously, the construction is much more complex than probably estimated on that basis in 1986. The military construction cost of these facilities, regardless of the technology, will probably be on the order of $200 to $250 million. I believe that was your question as I understand on the construction portion.

The total operation will vary from site to site depending on the size of the stockpile and the types of munition configurations, the numbers of different plant changeovers that are made to process the different agents and different technologies. So our estimate obviously is to complete by 2007.

Senator MCCONNELL. Mr. Parker, your estimate is 2008 or so if we should pick some alternate disposal?

Mr. PARKER. Yes, sir.

Senator MCCONNELL. Now, what about the cost of that? Do you have any sense of what it might cost to use another approach?

Mr. PARKER. The cost estimates, sir, are being massaged. We do have from the technology providers an estimate and it is the total cost to construct and operate would be in the $500 to $600 million range.

Senator MCCONNELL. So it would be more costly.

Mr. PARKER. No, I do not think—Mr. Bacon, I think referenced military construction only, versus total life cycle cost.

Senator MCCONNELL. Let us go back to the total cost then, life cycle cost.

Mr. BACON. For a Blue Grass facility?

Senator MCCONNELL. Using incineration.

Mr. BACON. I believe that number is about $1 billion.

Senator MCCONNELL. And life cycle costs? Apples and apples. Life cycle costs on an alternate technology are likely to be?

Mr. PARKER. Including everything, the government oversight cost, the depot operating cost, as well as the contract value, it is going to be about the same, Senator. The size of the plants, the complexity of the plants, the size of the work force and the operating duration, whether it is an incinerator or an alternate technology, is fundamentally the same. So the life cycle cost within our ability to estimate is going to be the same number.

ALTERNATIVE TECHNOLOGIES

Senator MCCONNELL. Mr. Parker, you have been around for a while. You recall there has been considerable opposition to exploring alternatives to incineration, which I have been advocating for years. I finally won that battle over a lot of reluctance inside the DOD. Do you feel like the effort to look at alternatives has been worthwhile?

Mr. PARKER. Yes, sir, it has. I believe the most significant value, I think, was to bring in the constituency who was very, very skeptical of where the Department of Defense was going with the chemical weapons disposal program and bring them in as part of the process, open the process up, and show them that what we do internal to the Department of Defense including the Department of the Army, is straightforward, above board, that there is honesty and integrity in the process, and to bring them in and show them and allow them to participate in the decisionmaking process.

The decisions are made by the Department as our responsibilities, but the bringing the public in—and that includes a spectrum of the public from people who are very supportive of the incineration approach to those who are vehemently opposed to the incineration approach.

Senator MCCONNELL. Can you describe the level of support you have received from above on this whole issue of looking at alternative technologies during the process?

Mr. PARKER. At the Secretary of Defense level, the instruction from Dr. Kaminski when I was chosen to do this job was to go out and find alternate technologies if they exist and determine whether or not they are appropriate and to do that in such a manner as that it resolves the technology issue and takes it off the political table.

The Office of the Secretary of Defense has been very supportive throughout this. I have had very close collaboration with my counterpart in the Army, Mr. Bacon, through the program. The Army has been very respectful of the way the Congress constructed Public Law 104–208, which required a direct reporting line from the alternate program into the Office of the Secretary of Defense.

Senator MCCONNELL. So PMCD has been enthusiastic about looking at these alternatives from the beginning?

Mr. PARKER. Well, I would say that they have observed the law and we have shared information back and forth. We do have to recognize, Senator, that the Program Manager for Chemical Demil is pursuing two alternate technologies or alternative technologies at two sites, Edgewood and Newport, and that much of the information that we started the ACWA program which came from a very open collaboration with the team within PMCD that provided that information.

Senator MCCONNELL. But in any event, you think that the community involvement that came about as a result of looking at alternative disposal methods has been a healthy thing for the Army and ought to be pursued in the future in these kinds of issues, right?

Mr. PARKER. I believe so, Senator. I do not know that we could have ever reached a consensus had we used a more traditional, inward-focused process. We had to bring in the affected community so that they would have some sense of confidence that we really were exploring every possible alternative and giving them full evaluation.

Senator MCCONNELL. Dr. Westphal, when do you expect a decision to be made with regard to Kentucky as to which approach to take, some alternative, assuming we finish that up—and the date to finish that, Mr. Parker, is when, to finish up the assessment of alternative techniques?

Dr. WESTPHAL. I think Blue Grass is in the spring of 2002. Am I right on that?

Mr. BACON. Yes.

Senator MCCONNELL. So some time next year we will have an announcement about which method of disposal you prefer, is that right?

Dr. WESTPHAL. Right.

COMPLETION SCHEDULES

Senator MCCONNELL. Now, in your testimony you state that the stockpiles for Arkansas, Alabama, and Utah are all on schedule to be completed by 2007, and we have heard that again today. Is that correct?

Dr. WESTPHAL. Yes, sir.

Senator MCCONNELL. All of those sites are going to be cleaned up and completed by 2007?

Mr. BACON. Sir, Senator McConnell, a point of clarification there. In terms of cleaned up, by 2007, actually 2006, we will meet the Chemical Weapons Convention destruction of all the chemical warfare materiel. Closure of the facility, we are not bound by the treaty, but we will do that in an orderly fashion, and it may or may not be completed by 2007, but shortly thereafter.

Senator MCCONNELL. So in terms of the concerns of the communities that live in proximity to it, the dangerous materiel will be destroyed by then?

Mr. BACON. The dangerous materiel will be destroyed, the hazardous material will be contained.

Senator MCCONNELL. Then I think I heard at Blue Grass, Kentucky, we are talking about a year or so later, no matter which approach is taken, whether we do it through incineration or some other disposal method. Is that right? You all are shaking your heads yes.

Mr. BACON. Yes, sir.

Dr. WESTPHAL. Yes, sir.

Senator MCCONNELL. This is a matter of no small concern to the people in my State. So you are shaking your heads yes?

Dr. WESTPHAL. Well, I think we have to—I have considerable experience dealing with environmental impact statements in my previous job and I can tell you that predicting on a timely basis conclusion of environmental impacts and getting through all of that is sometimes risky. I would say that we are going to have to take some very strong steps to ensure that we move along expeditiously.

I think the leadership of the Department——

Senator MCCONNELL. I hear you hedging your bets.

Dr. WESTPHAL. No, not at all. What I am telling you is we want to make a commitment to you and to your constituents that we will really focus on this and we will make sure that we do this as expeditiously as possible, and make sure that these environmental impact statements are done in a timely way and we do not drag this process on.

If we drag it on, not only do we risk greater danger to the communities by the stockpiles themselves, but we also risk alienating our chairman here by asking him for more money, an extension of time and so on and so forth.

I want to tell you that I am in earnest about trying to do whatever I can and for the Department to do whatever it can to address the management issues and to expedite this program.

PRIORITY OF THE CHEMICAL DEMILITARIZATION PROGRAM

Senator MCCONNELL. Let me just ask you, Dr. Westphal, in closing: Other than in preparation for this hearing, how often have you

attended meetings or held conversations with senior Army officials on the chemical disposal program?

Dr. WESTPHAL. Only once prior to this, to prepare for this hearing. I have been in this position now for about 2 months. Only once before.

Senator MCCONNELL. Well, you know, I think part of the problem over the years, and I will finish up, Senator Stevens, is that the chemical demilitarization program has just not been a top priority at the Department. It is a matter of enormous concern to those of us who have constituents located in proximity to these dangerous weapons.

I hope, keep hoping—this is one of the first issues that came up when I came here 16 years ago, now almost 17 years ago—that we are about to see the end of these weapons. I hope with new people coming in that this will occupy a level of priority so that we can not only see the light at the end of the tunnel, we can emerge from the tunnel and it is over, some time in the next 7 or 8 years.

Can we expect that, Joe?

Dr. WESTPHAL. Yes, sir. I think this is very important from the standpoint of health and safety and also environmental protection. I think it would do the administration a great deal of good to make sure that we apply the stringent constraints that you are demanding of the program.

I also would say that it is always a catch 22 situation. When I first began to ask questions about this program, one of my first questions is, can I go to the Senate, can I stand before the Senate Appropriations Subcommittee and say without any hesitation that the Army is taking every step possible at the existing sites, Senator Shelby's issues concerning Anniston, that we are taking every step under current technologies to make sure that we are conducting this work in a safe manner, that we are protecting citizens, and that we are working well with FEMA and local communities.

The answer I got was yes, we are doing everything we can to test, to monitor, to ensure that we do not have releases, that we do not have problems associated with both the disposal and storage of the weapons. So we need to just continue to make sure that we do that.

Senator MCCONNELL. Thank you, Mr. Chairman.

Senator STEVENS. Thank you.

MANAGING THE CHEMICAL DEMILITARIZATION PROGRAM

I am going to have to go to the floor for another matter. I just have to ask one question, though, before I go. It is my understanding, Mr. Parker, you answer to the Under Secretary of Defense for Acquisition and Technology, and, Mr. Bacon, you answer to the Assistant Secretary of the Army for Acquisition, Logistics and Technology and the Secretary of the Army. Has this bifurcated process delayed this?

I ask that because as I understand it it is the Assistant Secretary of Defense that is going to certify the alternative technology. Yet those technologies are being worked on by you, are they not, Mr. Bacon?

Mr. BACON. Sir, Senator Stevens, the technologies for the existing nine sites that we are working are managed by the Army and

myself. Alternative technologies for disposal of assembled chemical weapons are being assessed by Mr. Parker. But I would say that in the Defense Acquisition Executive review process and, in fact, in the milestone decision authority process of both the Army and the Department of Defense, we work collaboratively. We have integrated process teams and the actual chair of the overarching committee is a member of the Office of the Secretary of Defense (OSD), and Mr. Parker and I are co-chairs of those working committees that work up to that OSD level.

So I do not believe that it has hindered or delayed any of the activities or our ability to work together through that process, even though we report to separate positions.

Senator STEVENS. We may have to go into that later to see if that is part of the delay here, because it does seem to me that we are waiting for the Under Secretary of Defense to make the decision, but you are working on an entirely different line. I would hope that that does not mean that we have got to go up to the top and then come back, then go up to the top and come back.

You assure us that you are working together all along on these two different lines of attack?

Mr. BACON. Yes, sir. When our working committees have the final recommendations to the committee, at the OSD level, the Under Secretary of Defense for Acquisition, Technology and Logistics level committee, for that person to certify technologies and make technology decisions and recommendations, that will be later this year. We are not at that point yet, so the vacancy of that position has not impacted the decision.

Senator STEVENS. Senator Inouye, I apologize, but if we finish this panel call up the next panel; all right?

Senator INOUYE. Yes, sir.

Senator STEVENS. Thank you.

Senator INOUYE [presiding]. I would like to summarize what I have heard and ask for your opinion whether I am correct or not. Number one, you maintain that the risks involved in prolonged storage would be greater than disposal itself; is that correct?

Mr. BACON. Yes sir, Senator Inouye. That is certainly the case. The consequences of a storage accident in the public is what we are concerned about. The chemical demil facilities are designed to have safety features incorporated in them and layers of protection.

DESTRUCTION TIMELINES, COSTS, AND VARIABLES

Senator INOUYE. Therefore, it is incumbent upon the Department to dispose of these horrific weapons systems as soon as possible if we are to maintain public health and safety.

Mr. BACON. Yes sir, maintain the public health and safety and then, as expeditiously as we can, complete the job.

Senator INOUYE. However, it would be next to impossible at this stage to predict the time of disposal and the costs involved because of unanticipated problems, such as Environmental Impact Statement (EIS), environmental groups, legal proceedings, activities of the National Institute of Health (NIH), activities of EPA or FEMA; is that correct?

Mr. BACON. Yes, Senator, that is correct, that those are variables that can impact on cost and schedule, but keeping in mind that we

must place safety and protection of the environment number one, as Senator Shelby has reminded us also, that we do that. But there are those kinds of factors that can impact on cost and schedule.

Senator INOUYE. What you are telling us is that the science of disposal and demilitarization is a new science and it is still evolving. For example, Johnston Atoll was the first facility of its kind in the world, was it not?

Mr. BACON. Yes, sir. The Army had earlier destroyed stockpiles at Denver, Colorado, Rocky Mountain Arsenal, using similar technologies in the 1970's, which were protective of our worker health. But we did not have the much broader applications that we are using today.

Senator INOUYE. You are still learning from that Johnston experience?

Mr. BACON. Yes, sir. We apply those lessons that we learned from Johnston Atoll as well as the Tooele facilities, incorporated those designs into the new facilities. Anniston, for example, has many safety features enhanced in its facility where we have added additional pollution abatement systems, automated certain systems, that we are also doing at Tooele.

But we continue to use the lessons learned. A very extensive program.

Senator INOUYE. With all the knowledge that you have at this moment, you can estimate that Anniston can have its closure ceremony about 2011?

Mr. BACON. Sir, Senator Inouye, we plan to beat that substantially. We are planning to complete destruction of the weapons at Anniston by the year 2006 and have our final closure and get off the depot by 2007, 2008. But 2006 is our date to celebrate elimination of that risk to the Anniston community totally.

Senator INOUYE. Although we did not have any disposal site near our cities, we had one on an island not too far away. I can feel the concern expressed by my two colleagues, because we are constantly reading reports about chemicals being found at Spring Valley, Maryland. I think we should keep in mind that our first method of disposal was burial and we are now finding out the costs of such burials. So I can assure you, whatever we can do we will do.

Mr. BACON. Yes, sir.

ANNISTON TIMETABLE

Senator SHELBY. Mr. Chairman, could I ask one more question?

Regarding Anniston, let us talk about the timetable. Where are we today in the construction, just step by step briefly? Where are we, Mr. Bacon?

Mr. BACON. Yes, sir. Senator Shelby, today we are substantially complete with the construction of the facility.

Senator SHELBY. What does that mean?

Mr. BACON. What that means is we are in the 98, 99 percent.

Senator SHELBY. Ninety-eight, ninety-nine percent of your initial construction?

Mr. BACON. No, the construction of the facility, total construction of the facility. What that means is that there is a 1 to 2 percent time that we are correcting punch list items, construction anoma-

lies, making sure that all of the wiring is correct—the final finishing touches of construction.

Senator SHELBY. Westinghouse is involved in this, are they not?

Mr. BACON. Yes, sir, Westinghouse Anniston, who has been acquired by the Washington Group International, or Morrison-Knudsen formerly. We will have in fact a ceremony—we would like you to attend—on June 8th.

Senator SHELBY. Will it be safe?

Mr. BACON. Yes, sir, it will be safe. As a matter of fact, our safety record in building and operating these facilities from the Occupational Safety and Health Administration (OSHA) reviews and from the OSHA standpoint, as well as all of the other safety reviews, is remarkable.

Senator SHELBY. How are you going to meet the concerns of people in my State in the Anniston area, several hundred thousand people that have genuine concerns about whether this facility will operate safely? How do you do this? We are going to have another panel in a few minutes that is going to raise some concerns that they have with your facility.

Mr. BACON. Senator Shelby, I understand those concerns and we take those very seriously. We will be addressing each one of them during the period between completion of construction and the beginning of operations, the phase we call systemization, where we will actually be testing the system. We will then enter into surrogate trial burns. In other words, we will be burning some organic compounds that are much more difficult to destroy than the nerve agents. Those are to satisfy the conditions of the permit, to demonstrate that we can operate the facility within the constraints of the permits.

PUBLIC SAFETY

Senator SHELBY. How are you going to, in the short period of time, alleviate the concerns of evacuation in case something went wrong in the community, something lethal, deadly? These are real concerns.

Mr. BACON. I understand and am concerned about those issues also. You will hear from Mr. Salter on the next panel, that the Army and FEMA work very diligently to demonstrate that the public will be protected and can be given the necessary protective actions to take to assure that in the event of a stockpile storage accident, which would generate the greatest hazard to the public, that they will be protected.

As I was saying, during the next year, from completion of construction to start of operations, that is where we really prove that we are ready to operate. We want to expand our public outreach to assure we get that kind of information out to the citizens.

Senator SHELBY. Well, I can feel a lot of questions coming from the area, people in my area of Alabama. They are really concerned.

Mr. Secretary, do you have a comment?

Dr. WESTPHAL. Just a comment, Senator. As you know, we are beginning this process in a way—we have some experience at Johnston Atoll, but the situation there is somewhat different than it would be at Anniston or some of the other places where there are larger populations around them. So what I would ask is to say, you

know, the Army has protocols for, as you use the word, for transparency, for informing people, and for getting input from stakeholders and so on. But we may not have all the answers as to how to best do that. We look to you and to other members of the delegation perhaps to help us identify what those might be if you feel we are not doing everything.

Senator SHELBY. We are looking to you for the central issue here to be resolved. That is safety, real safety. Then there is the perception of safety and concern. I think you have both and I think you have to deal with them and you have to deal with them in a forthright way. You cannot cut corners. This is not something that you can cut corners on. There is too much at risk, too much risk. Too many people could be at real risk, and you know it.

Dr. WESTPHAL. Yes, sir.

Senator SHELBY. Thank you.

ADDITIONAL COMMITTEE QUESTIONS

Senator INOUYE. Mr. Secretary and your colleagues, we thank you very much. The chairman has asked me to thank you for your testimony.

Dr. WESTPHAL. Thank you, Mr. Chairman.

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

QUESTIONS SUBMITTED TO DR. JOSEPH WESTPHAL

QUESTIONS SUBMITTED BY SENATOR RICHARD C. SHELBY

MANAGEMENT STRUCTURE

Question. Last spring, the General Accounting Office detailed problems in the execution of the demilitarization program due to a complex management structure, which hindered accountability. What has the Army done to address these problems? What more can be done in the next year?

Answer. The management structure of the chemical demilitarization efforts has been shaped largely by statute. Program management roles and responsibilities as well as accountability and coordination roles in the area of chemical demilitarization within the Army have been clearly defined by the Department of Defense.

The Program Manager for Chemical Demilitarization (PMCD) manages and executes the U.S. Chemical Demilitarization Program. He reports directly to the Assistant Secretary of the Army for Acquisition, Logistics and Technology (ASA(ALT)), who serves as the Army Acquisition Executive with milestone decision authority for the Chemical Demilitarization Program. The Program Manager for Assembled Chemical Weapons Assessment (PMACWA)—a research and development program—manages and executes the ACWA Program. Consistent with Public Law 104–208 and Public Law 105–261, the PMACWA reports to the Under Secretary of Defense for Acquisition, Technology, and Logistics (USD(AT&L)). The Assistant Secretary of the Army for Installations and Environment (ASA(I&E)), in coordination with the Federal Emergency Management Agency (FEMA), provides program oversight, policy, and guidance to the Chemical Stockpile Emergency Preparedness Program (CSEPP). The Deputy Assistant Secretary of the Army for Chemical Demilitarization (DASA(CD)) ensures coordination among the appropriate organizational elements involved with chemical demilitarization in the Army and the Department of Defense.

Procedures are in place to promote the flow of program-related information between all elements of the program. This has enhanced communication and coordination between the Offices of the Secretary of Defense, Assistant Secretary of the Army (Acquisition, Logistics and Technology); the ASA(I&E); the program managers for Chemical Demilitarization and Assembled Chemical Weapons Assessment; the Soldier Biological and Chemical Command; and Federal Emergency Management Agency.

The Department of Defense is conducting a Defense Acquisition Executive Review of the Chemical Demilitarization Program in the first quarter of fiscal year 2002. One of the issues that will be addressed at this review includes the formalization of a plan that integrates roles and responsibilities of the PMCD and the PMACWA.

MAJOR CHALLENGES

Question. Mr. Secretary, as of today, what are the major challenges presented by the complex task of safely destroying the chemical stockpile?

Answer. The Army faces a number of significant challenges as we move forward with existing and planned operations to meet requirements of public law and the Chemical Weapons Convention. It is imperative that we maintain momentum and the full funding necessary to see the projects mature through the systemization, operations and closure phases. We must determine a technology path forward for Pueblo and Blue Grass, using sound science and frank dialogue, so we can proceed with the destruction of those stockpiles. Personnel retention issues, including the maintenance of the right skills mixture for government and contractor employees, must be successfully addressed for these relatively short duration projects. We must successfully manage the degradation of the stockpiles, which is an ongoing issue as the weapons deteriorate with age, so we can continue to minimize risk to the workers and the public. Finally, developing and achieving approved closure standards, working with the various stakeholders at all of our sites, to include state and local governments, continues to be a key program objective.

PUBLIC OUTREACH EFFORTS

Question. What specific "increased outreach efforts" can the Army implement which will ensure that the public remains properly informed as to their safety?

Answer. The Army and the Program Manager for Chemical Demilitarization (PMCD) believe that public outreach is essential to accomplishing its mission and will continue to build upon the already extensive outreach program that exists at each of the eight stockpile sites. We engage the public through a strategic, targeted, and measured approach to involvement and outreach. We have site teams and outreach offices at each of the eight stockpile locations that are engaging the public on a daily basis. Across all of the site locations, over 34,000 individuals have been reached in the past six months alone via targeted outreach, presentations and public meetings with school, civic, and community groups.

Anniston, Alabama, is a strong site example that highlights the PMCD's outreach and involvement efforts. We have actively sought partnerships with local elected officials and citizens' advisory commissions (CACs), and have focused efforts on communities that have expressed concern about the proposed facility. In the last six months, we have had 26 local events, such as speakers' bureaus, that reached well over 600 residents. Facility tours also help the community understand the disposal project. In the past six months, 23 tour opportunities have guided almost 600 residents through the facility grounds.

As the demilitarization program progresses, we will continue these efforts and increase targeted outreach to local schools and colleges, businesses, and community civic groups. We will enhance already developed targeted outreach programs to minority communities particularly at sites with large African American, Hispanic, or Native American populations. We continue to conduct spot surveys in the site communities to gauge public sentiment and how the public wants information about the disposal program.

In addition, we will continue to enhance existing partnerships with CACs, the Chemical Stockpile Emergency Preparedness Program, the Environmental Protection Agency, elected officials, and states and local counties, which will provide opportunities to coordinate the distribution of comprehensive information about chemical weapons disposal plans.

EMERGENCY PREPAREDNESS

Question. Mr. Secretary, it is my understanding that Anniston's March 2001 Chemical Stockpile Emergency Preparedness Program Exercise was a failure. I am told that one of the primary causes was computer software utilized by the emergency operations center. Do you believe that this problem will be fixed? How can this Committee help?

Answer. The emergency management information system used at the Anniston exercise meets Army requirements. However, it falls short of meeting off-post requirements identified by state and local officials at the eight stockpile sites. Some state and local emergency management officials advocate using another software program, the Federal Emergency Management Information System, to meet these

requirements. Accordingly, the Army is conducting an independent assessment of the effectiveness, suitability, and reliability of both systems for meeting on-post and off-post requirements. Once that assessment is completed, the system then will be properly tested and reviewed to determine an appropriate path forward. The Committee can help in this effort by supporting the adoption of a single automation system as the most cost-effective approach to meet on-post and off-post emergency management requirements at all sites.

ALTERNATIVE TECHNOLOGIES

Question. Given the state of the program in Anniston, does a faster, cheaper, and safer alternative exist to eliminate these weapons?

Answer. No, the incineration facility being constructed at Anniston represents the only proven systemized technology available now to dispose of assembled chemical weapons. Incineration technology has been demonstrated to safely and effectively destroy all of the chemical agents and energetics, as well as completely treat contaminated metal munition casings. The Army continues to track emerging technologies in an attempt to identify alternatives to incineration that may be faster, cheaper, and offer more protection.

The Anniston disposal facility is 99 percent complete and we are scheduled to start agent operations in the third quarter of fiscal year 2002. It would take numerous years to develop the systems, design a facility, obtain the requisite environmental permits, construct the facility, and prove-out the alternative technology(ies). In that time alone, using the incineration facility being constructed at Anniston, we could eliminate 90 percent of the risk associated with the Anniston stockpile. Incineration has been proven to be a safe technology as we have completed the Johnston Atoll Chemical Agent Disposal System mission and continue operations at the Tooele Chemical Agent Disposal Facility.

Lessons learned from these facilities have been incorporated into the facilities currently being built, continuing to add to the safety of the Anniston facility and operations.

Question. What is your response to opponents of incineration who would like to see the facility in Anniston retrofitted for alternative technologies?

Answer. The Army's paramount objective during the storage and destruction of chemical weapons is to provide maximum protection to the public, the workers, and the environment. All risk analyses prepared to date have shown continued storage poses the greatest threat to the local community. The risks are dominated by external events such as seismic events, lightning strikes, or tornadoes. While the possibility of these events occurring are extremely remote, the consequences could be severe. However, the Army is continuing to identify alternative technologies that may be faster, cheaper and offer more protection. At this time, pilot testing of an alternative technology would be necessary since no alternative technology has been used in full-scale operations. The construction of an alternative technology pilot-scale facility would take at least 18 months from the time all permits were received. In that time alone, by operating the incineration facility being constructed at Anniston, 90 percent of the risk associated with the Anniston stockpile would be eliminated. Retrofitting facilities nearing completion will only increase risk to the public by delaying the destruction of the stockpile. If at some point in the future, an alternative technology is demonstrated to be appropriate for consideration for retrofitting the Anniston facility, the local community would be encouraged to participate in that decision.

QUESTIONS SUBMITTED BY SENATOR DANIEL K. INOUYE

CHEMICAL WEAPONS DISPOSAL: MEETING THE PROGRAM SCHEDULE

Question. The Department of Defense (DOD) Chemical Demilitarization program has been the subject of many legal, environmental, and local community concerns. What are the greatest challenges—legal, environmental, financial—DOD must overcome in order to meet the planned disposal schedule?

Answer. The Army faces a number of significant challenges as we move forward with existing and planned operations to meet requirements of public law and the Chemical Weapons Convention. It is imperative that we maintain momentum and the full funding necessary to see the projects mature through the systemization, operations, and closure phases. We must determine technological paths forward for Pueblo and Blue Grass, using sound science and frank dialogue, so we can proceed with the destruction of those stockpiles. Personnel retention issues, including the maintenance of the right skills mixture for government and contractor employees,

must be successfully addressed for these relatively short-duration projects. We must successfully manage the degradation of the stockpiles, which is an ongoing issue as the weapons deteriorate with age, so we can continue to minimize risk to the workers and the public. Environmental challenges involve receipt of environmental permit modifications from regulatory agencies in a timely manner so that operational schedules can be met and costs contained. Also, the ability to expeditiously incorporate into operating facilities any new standards and requirements mandated by new and/or amended regulations is key to meeting program challenges. Finally, developing and achieving approved closure standards, working with the various stakeholders at all of our sites, to include state and local governments, is a key program objective.

Question. The most recent report on the Department of Defense chemical weapons activities notes that the legal actions have not delayed disposal activities or construction. How have you been able to address these legal challenges and stay on schedule? What gives the Army confidence that it can continue to address future legal challenges and stay on schedule?

Answer. The Army has been able to successfully address all legal challenges. Those legal challenges have not affected the schedule for several reasons. First and foremost is the fact that all sites continually work diligently to comply with all environmental and safety requirements. Second, in the situations where our regulatory compliance is questioned, we stress safety and problem solving over production. Third, the Department of Justice has done an outstanding job of demonstrating our record of environmental and safety compliance before judicial bodies.

The Army is confident it can continue to prevent schedule delays by following this proven formula in the future. We are confident that we will continue to address future legal challenges because it is the Department's policy to comply with all applicable laws and regulations, and because baseline incineration has proven to be a safe and effective technology. Any schedule delays may be attributable to our meeting all applicable laws and regulations, while stressing safety and problem solving over production.

Question. There have been reports of chemical leaks at the Johnston Atoll and Tooele (pronounced "Too-elly") facilities. How did these leaks affect the program? Is there flexibility built into your plans to account for unanticipated events like these? Can we dispose of chemical weapons at a faster rate than we plan?

Answer. We have experienced a total of five chemical agent releases at our Johnston Atoll Chemical Agent Disposal System (JACADS) and Tooele Chemical Agent Disposal Facility (TOCDF) during the more than 15 years of operations destroying more than 7,000 tons of agent. These releases have been so small that the agent dissipated to the point where it could not be measured within a few feet from the point of release. Independent investigations by groups such as the Centers for Disease Control and Prevention have concluded that these minute releases posed no threat to the public, the workforce, or the environment. However, we take these releases very seriously. When such an event occurs, it has been and continues to be our policy to suspend operations to thoroughly investigate the cause. The purpose of the investigation is to determine what happened and to develop corrective actions to prevent the reoccurrence of the release. Once the corrective actions are implemented, we include these improvements in our lessons learned program, which requires these lessons learned be reviewed for applicability at all of our other facilities. The corrective actions can affect many aspects of our plant operations to include process changes, facility changes, management changes, personnel hiring practice changes, training changes, etc.

We plan for, but do not expect, these types of events to occur. Because these events are not readily predictable, we have not included any associated downtime in the schedules to accommodate such events. We also believe that our lessons learned program has been very effective in reducing these types of events. Our goal is to eliminate these events.

We are working to identify ways to dispose of the chemical weapons faster while ensuring that the safety of the workforce, the general population, and protection of the environment remain our top priority. Our challenge is addressing the number of new environmental requirements that are placed on the program on a yearly basis and the number of new issues. We are committed to meeting every new environmental requirement while ensuring that we protect the public and our workers. The program continues to strive to reduce schedule without sacrificing safety or environmental compliance.

Question. Please comment on how we as a nation are doing in disposing of chemical weapons compared to other countries?

Answer. Four parties to the Chemical Weapons Convention (CWC), including the United States, have declared their chemical weapons stockpiles. Jose Butsani, Direc-

tor General of the Organization for the Prohibition of Chemical Weapons, the administrative body of the CWC, stated that "three of the four declared possessors of chemical weapons—with Russia the only exception—have complied with the first CWC timeline for the destruction of their stocks of chemical weapons. They have by now destroyed a total of 5,600 tons of chemical agent and 1.6 million of munitions and containers, or almost 20 percent of the total declared quantity of such munitions and containers. The United States, which has already destroyed almost one fifth of its chemical weapons arsenal, has set an impressive example in this regard."

The majority of the world's chemical weapons destroyed to date have been from the U.S. stockpile. In addition, the United States facility on Johnston Island was the first continuously operating chemical weapons destruction facility that completed destruction of its stockpile and was recently certified as closed via a letter from the Organization for the Prohibition of Chemical Weapons dated April 25, 2001.

Russia, the possessor of the world's largest chemical weapons stockpile, is still in the process of constructing destruction facilities and has not yet begun destroying its chemical weapons stockpile. It has also recently requested the five-year deadline extension for destruction of its chemical weapons.

PUBLIC SAFETY—STORING CHEMICAL WEAPONS

Question. The Defense Department claims that the greatest risk to the nation from our chemical stockpiles is the prolonged storage of chemical weapons, and not the disposal of them. What is the greatest threat to continued safe storage of these weapons—natural disasters, leaky containers, theft, or other? Are there any sites in particular about which you are most concerned?

Answer. Public risks of munitions storage are dominated by a class of accidents or external events that result from influences external to storage. In particular, the risks of accidents initiated from a seismic event (i.e., earthquake), lightning strike, tornado, or aircraft crash provide the greatest threat to continued safe storage of chemical munitions. The risk values vary substantially among sites due to the population differences around the sites, the mix of munitions that are stored at the sites, and the site-specific weather. In general, the storage risks at the eastern storage sites are dominated by lightning induced accidents, and earthquakes dominate the risks at the western sites. Because of the high storage risk from lightning (predominantly based on the risk of ignition of the M55 rockets) the Army has taken steps to evaluate and reduce this vulnerability. Research in this area accounts for new bonding procedures within the igloos to reduce the threat of lightning induced rocket ignition, and new testing has been initiated that has characterized the specific vulnerability of each individual rocket storage igloo. These test results have led the Army to a better understanding of the susceptibility of the igloos to lightning, allowing it to continue to pursue efforts to reduce this risk where possible. However, it is unlikely that the risk posed by lightning will ever be eliminated and will likely continue to dominate storage risks at our eastern sites. Likewise, the risks associated with earthquakes at our western storage sites cannot be entirely eliminated.

Activities related to normal maintenance of the stockpile account for less than one percent of the public risk. Agent leakage is a minimal public risk because of the typically small amounts of agent involved, as well as the containment afforded by the storage structure. There is, however, a risk to storage site workers that must deal with these leaking munitions. To combat these risks, the Army maintains strict personnel safety and procedural standards, which have proved successful in protecting our people over the years.

Overall, the M55 rocket is the highest-risk munition in storage. In addition to its susceptibility to lightning-induced ignition, they pose a higher degree of deterioration and leakage than other munitions.

Theft and terrorist activities are possible, but are not considered to be the greatest threat to continued storage and are not modeled in the risk assessments for each site.

There is no one site that exhibits a far greater concern than another. Each site has a unique set of circumstances that gives it a different, but real vulnerability. There is no site that escapes the Army's concern for prolonged storage.

Question. Are you concerned that our storage facilities and containers will begin to fail before we can dispose of all chemical agents?

Answer. Since our storage facilities are in good shape, we are not concerned that our storage facilities and containers will begin to fail before all chemical agents and munitions are destroyed if we continue to meet our destruction schedule. We believe we can continue to protect the general public from the risks of significant releases until the stockpile is completely destroyed. The maintenance of an aging stockpile

requires intense management. Even though we have had an exemplary safety record in maintaining our stockpile, our goal is to eliminate the stockpile as quickly as possible to lessen the risk of exposure to our workers due to the need for continual handling and repacking.

Agent detection technology has improved significantly, allowing early detection of leaks. Leaks do continue to occur in overpack containers. During fiscal year 2000, 98 overpacks storing chemical munitions leaked. Each leaking overpack container was packed in a secondary overpack container. Since 1975, approximately 3,084 leaking munitions have been containerized. Many of these are in aging overpacks that still remain in storage. (Note: approximately 503 overpacks have leaked since then).

New container procurement will address leakage permanently, pending munitions disposal. The Army has a production and fielding plan for new containers for overpacking leaking munitions based on the historical tendency for items to fail or leak. In other words, propelling charge containers tend to leak more frequently than other overpacks, so the Army has manufactured new high-performance containers or modified existing containers to address this condition.

On the other hand, Spray Tank containers, Wet Eye Bomb containers, and Bull Pup containers have never leaked. The Army has not designated or tested containers for this purpose. These items are stored at locations where disposal operations are underway or are imminent and the potential for failure is minimal.

The Army has also fielded a portable helium leak tester to allow workers to selectively identify and eliminate poor performing containers that could otherwise fail after packaging but prior to disposal.

Question. Please provide the Committee with a status report on the Army's efforts to protect these chemical weapons facilities from terrorist threats.

Answer. The chemical weapons facilities, which the Army is responsible for, are protected from terrorist threats by the administration of an ongoing comprehensive chemical security program that is an integral part of the Army's Chemical Surety mission. Implementation of the Army's chemical security program is monitored on a continuing basis by security elements of the U.S. Army Soldier and Biological Chemical Command (SBCCOM), the Army Materiel Command, and the Department of the Army Inspector General.

In addition to the chemical security program, SBCCOM administers a proactive antiterrorism/force protection program, which implements specific Army guidelines for the protection of facilities against terrorist threats.

Finally, within SBCCOM, the chemical depots and activities share classified threat information by means of a secure, automated Intelligence and Threat Dissemination System (ITDS). The ITDS is a stand-alone secure wide area network that was developed and fielded by SBCCOM and is administered from SBCCOM headquarters. The secure system provides SBCCOM commanders and directors a real-time, secure command network with the capability for receiving the most current classified threat information, requesting specific threat data or intelligence reports, and sharing local threat situations and information with other SBCCOM installations and activities.

ALTERNATIVE TECHNOLOGIES

Question. The Department of Defense (DOD) is required to test alternatives to the current system of incinerating chemical weapons. Do we know of or have we tested any alternative technologies that are as safe, effective, and cost efficient as the current system?

Answer. DOD has completed the demonstration of six alternative technologies to the baseline incineration. Four of these technologies were successfully demonstrated and found to be possible candidates to proceed to pilot testing. As required by Public Law 105–261, DOD is assessing whether these alternative technologies can be certified to be as safe and cost- and schedule-effective as the incineration process. DOD is also assessing whether any of these alternative technologies should be pilot tested and if so, where. These related assessments are being conducted through a Defense Acquisition Executive review. The initial Defense Acquisition Executive review is scheduled to be completed in the fall of 2001, with a technology decision expected in the fall of 2001 for the Pueblo, Colorado, site and the third quarter of fiscal year 2002 for the Blue Grass, Kentucky, site.

Question. What do you estimate to be the total costs to complete testing of all alternative technologies under consideration? When do you expect to complete this testing?

Answer. The cost to complete the six technology demonstrations was $99,725,000. The follow-on engineering design studies (phases I and II) to determine if these

technologies are suitable for certification under Public Law 105–261 is estimated to be $113,878,000. The two demonstration programs were completed in May 1999 and October 2000, respectively. The engineering design study phase I will be completed in October 2001 and the phase II will be completed in November 2001. The technology decision for Pueblo, Colorado, will be complete in the fall of this year and the decision for Blue Grass, Kentucky, is expected in the third quarter of fiscal year 2002.

JOHNSTON ISLAND: COMPLETING CHEMICAL WEAPONS DISPOSAL

Question. Congress has received reports that the chemical weapons disposal operations at Johnston Atoll are now complete. This is in fact the case, is it not?

Answer. The Program Manager for Chemical Demilitarization has completed stockpile destruction operations at the Johnston Atoll Chemical Agent Disposal System (JACADS). More than 412,732 munitions and bulk items were safely destroyed at the facility (over 2,000 tons of agent). Treaty oversight by the Organization for the Prohibition of Chemical Weapons ended in January 2001 and was certified complete on April 25, 2001. The environmental permit required a final closure plan that was submitted to the Environmental Protection Agency in July 2000, and the Army is coordinating with several federal oversight agencies for closure of the JACADS facility.

Question. Please describe what other chemical warfare materiel remain on Johnston Island and how and when the Army intends to dispose of these?

Answer. There are currently 62 Chemical Agent Identification Sets (CAIS) stored on Johnston Island. A class 2 Resource Conservation and Recovery Act permit modification request has been submitted to the Environmental Protection Agency to incinerate the CAIS in Johnston Atoll Chemical Agent Disposal System. Following approval of the modification, disposal of these CAIS is scheduled for September 2001.

Question. What chemical warfare materials remain at other sites in the Pacific? What is the Army's plan for dealing with these materials?

Answer. There are a number of additional sites in the Pacific theater where chemical materiel may be recovered. These sites are addressed in a classified annex to the 1993 Survey and Analysis Report and a 1996 update. There were a number of locations in the Pacific where chemical weapons were stored and tested. The United States did not abandon any chemical weapons at these sites; however, some may be recovered as the result of legitimate disposal or testing actions conducted during World War II. There was also extensive training with Chemical Agent Identification Sets (CAIS), which may be found at any World War II training site. CAIS are vials and bottles that contain small amounts of actual chemical agent. Complete CAIS sets can contain amounts similar to munitions, but do not have explosives associated with them.

In the event chemical warfare materiel is recovered, these items would likely be CAIS or chemical weapons from previous chemical weapons testing, storage, and disposal. Possible approaches to destruction of chemical items, when discovered, will involve evaluating whether they should be destroyed on-site, moved to a collection point and destroyed, or moved back to the United States or a U.S. territory for eventual destruction. If on-site destruction is elected, the Army would consider use of the Rapid Response System (RRS) for CAIS and the Explosive Destruction System (EDS) for munitions. Other systems are being developed and tested as part of the Army's Non-Stockpile Program to address this problem in the future, but the RRS and EDS are available now.

Possible movement of recovered chemical items would be subject to a destination analysis. This analysis would recommend movement to either a site where the mobile systems could be more effectively used or where an existing demilitarization system could deal with the problem. Such an analysis would be done on a case-by-case basis, and would require approval of the receiving site. Site approval would require all necessary approvals from regulatory agencies, including local, State, territorial, and federal agencies.

Question. If, in the future, you find non-stockpile chemical materials in the Pacific theater, where will you dispose of these? Are there environmental and legal issues associated with handling and transporting chemical warfare items you uncover in the future?

Answer. The potential exists to recover additional chemical warfare materiel (CWM) from numerous sites in the Pacific, from both U.S. territories and foreign sites similar to those items recovered from the Solomon Islands, Guam, and Tuvalu Funa Futi in the 1990's. The product manager for Non-Stockpile Chemical Materiel has developed a destination analysis in coordination with the Department of the Army and the Department of Health and Human Services to assist decision makers

in determining the disposition of recovered CWM. When CWM is recovered, we have three options for handling it: storage on-site for future on-site treatment; storage on-site until an acceptable alternative storage and/or treatment location can be found; and immediate transportation to an acceptable off-site location for storage and/or treatment.

Our preference is to treat and dispose of recovered CWM on-site. However, numerous public, environmental, and legal issues will apply to all recoveries in the Pacific theater. Any recovered CWM brought into the United States from a foreign country will be subject to the applicable provisions of environmental regulations and laws to include, but not limited to, the Resource Conservation and Recovery Act, the Comprehensive Environmental Response Compensation and Liability Act, and Title 50 of the United States Code.

Some of these issues are public health and safety risks associated with storage, treatment, and transportation. Additionally, the legislative constraints of 50 United States Code 1512a(b) on the movement of recovered CWM apply. Specifically, in the case of any chemical munitions that are discovered or otherwise come within the control of the DOD and that do not constitute part of the chemical weapons stockpile, the Secretary of Defense may transport such munitions to the nearest chemical munitions stockpile storage facility that has the necessary permits for receiving and storing such items if the transportation of such munitions to that facility is considered by the Secretary of Defense to be necessary; and can be accomplished while protecting public health and safety.

CLOSING JOHNSTON ATOLL CHEMICAL AGENT DISPOSAL SYSTEM (JACADS)

Question. In your testimony, the Army plans call for completely closing the Johnston Island facility by the fourth quarter of fiscal year 2003. Yet in a briefing received by the committee staff just two weeks ago, the plan at that time was to close the facility by the fourth quarter of 2002. Why has the plan changed? Do you foresee any problems with meeting the new date?

Answer. Completion of all Johnston Atoll Chemical Agent Disposal System (JACADS) closure activities are scheduled for September 2003. This closure plan was issued to the Environmental Protection Agency in July 2000 and has remained unchanged since that date. After five months of actual JACADS closure activity, the project is on schedule for a September 2003 completion.

Question. What are the key events that must occur before JACADS can be completely closed? Are there environmental issues that remain?

Answer. Closure activities, which began in January 2001, are approximately 10 percent complete. These activities include disposal of contaminated materials, including all secondary wastes, such as contaminated plastic suits and charcoal. Other activities include decontamination of the building and related equipment, dismantling equipment and putting it in a furnace for thermal treatment, verifying "clean closure" of materials and structures that will remain in place, and defining the future use of the site that is acceptable to all stakeholders, including the U.S. Fish and Wildlife Service.

Question. What are the plans for disposing of the facilities? For example, what do you plan to do with the incinerator?

Answer. Machinery, conduit, conveyors, wall sandwich panels, scabbled concrete, etc. will be processed through the metal parts furnace (MPF). The deactivation furnace system and liquid incinerator will be taken apart and processed through the MPF. The MPF will be decontaminated to an agent free standard and shipped to a continental United States hazardous waste disposal site.

Question. What are the costs of closing the facility?

Answer. The Johnston Atoll Chemical Agent Disposal System (JACADS) closure costs are expected to be about $400 million. The closure costs for sites in the continental United States are expected to be less than Johnston Atoll. Three key contributors to the JACADS closure costs are labor, regional cost differences, and the processing of secondary wastes during closure activities.

MANAGING THE CHEMICAL DEMILITARIZATION PROGRAM

Question. Congress has received reports that state and local officials often get mixed messages about the Chemical Demilitarization program because of multiple lines of authority and responsibility for the program. Is the Army aware of this criticism and, if so, how does it plan to address the issue?

Answer. Yes, this issue was addressed in the May 2000 General Accounting Office Report. The Army is sensitive to the concerns expressed by state and local officials who are seeking clear and consistent information about the Chemical Demilitarization program. The program managers for Chemical Demilitarization and Assembled

Chemical Weapons Assessment co-chair working integrated product team reviews and are working very closely in the development of the required environmental documentation to support the technology decisions for both the Colorado and Kentucky sites.

In addition, the Department of Defense is conducting a Defense Acquisition Executive Review of the Chemical Demilitarization Program in the fall of this year. One of the issues that will be addressed at this review includes the formalization of a plan that integrates roles and responsibilities of the Program Manager for Chemical Demilitarization and the Program Manager for Assembled Chemical Weapons Assessment. Such a plan should assist in the future dissemination of clear and consistent messages about the chemical demilitarization program. However, it should be noted that the management structure of the Chemical Demilitarization program has been shaped largely by statute and that further streamlining of roles and responsibilities may require changes in public law.

Question. Has restructuring the Chemical Demilitarization program been an issue in Secretary Rumsfeld's Strategic Review?

Answer. No. However, a Defense Acquisition Executive Review, scheduled for the fall of this year, is evaluating all aspects of the Chemical Demilitarization Program. This review will include the Chemical Stockpile Disposal Project (CSDP), Chemical Stockpile Emergency Preparedness Program, Alternative Technologies and Approaches Project, Non-Stockpile Chemical Materiel Program, and Assembled Chemical Weapons Assessment Program. The issues being addressed include Chemical Weapons Convention compliance, update of the Life Cycle cost estimate, update of program plans for closure of the CSDP facilities, and the path forward to implement a destruction method for the chemical stockpile sites in Pueblo, Colorado and Blue Grass, Kentucky.

QUESTIONS SUBMITTED TO JAMES BACON

QUESTIONS SUBMITTED BY SENATOR THAD COCHRAN

ALTERNATIVE DESTRUCTION TECHNOLOGIES

Question. Given both the technical problems and poor public perception of incineration, and given the technical problems of the alternatives looked at by the Army, such as the Plasma or the Bio Process, do you think the Army should explore closed systems which provide a viable alternative to incinerators?

Answer. The Army has been looking at closed or "batch" systems where agent destruction to a non-detectable level can be confirmed in the reaction mixture before it is discharged to provide a viable alternative to incineration at bulk agent storage sites. In 1994, the Office of the Project Manager for Alternative Technologies and Approaches was organized to perform research and development of chemical neutralization technology at the two bulk agent storage sites (Aberdeen, Maryland, and Newport, Indiana). Bulk agents are stored in steel containers called ton containers. Thus, there is no requirement to handle explosives, energetics, or munitions. In January 1997, the Defense Acquisition Executive authorized the Army to proceed with a program to establish full-scale pilot plants at these locations. Efforts at the Aberdeen site began in October 1998 with award of a systems contract to Bechtel National, Incorporated. Efforts at the Newport site began in February 1998 with a systems contract award to Parsons/Allied Signal (now Honeywell). Design completion and construction are ongoing concurrently for both sites. The technology employed at the Aberdeen site is chemical neutralization follow by biodegradation. The technology employed at the Newport site is chemical neutralization followed by supercritical water oxidation.

Question. I understand that the Adams Process is a closed system, which is being researched at the Diagnostic Instrumentation Analysis Laboratory (DIAL) Lab at Mississippi State University, and it provides more reliable destruction of chemical agents and mixed wastes. Are you exploring this alternative?

Answer. This technology has been evaluated according to the procedures and criteria used to monitor the development of emerging technologies to support the chemical demilitarization program.

The Adams Process reacts organic compounds with elemental sulfur, either in a vapor phase or liquid phase at temperatures ranging from 275 to 280 degrees Fahrenheit. Higher temperatures may be present in the vapor phase.

The Army performed lab-scale tests of the Adams Sulfur Process in 1993 to investigate the destruction of energetics. In addition, the Army performed limited testing with dilute mustard at Pine Bluff Arsenal, Arkansas, in 1995.

Based on the small-scale work performed to date, the Adams Process does not appear to offer benefits over other alternatives that have already been tested for the destruction of agents and energetics that are ready for pilot testing.

QUESTIONS SUBMITTED BY SENATOR ARLEN SPECTER

RISK OF CONTINUED STORAGE

Question. Explain the differences in the risk of continued storage versus the risk of destroying the weapons now.

Answer. Storage risk is higher primarily because of the potential for external events, such as earthquakes, tornadoes, lightning strikes, and plane crashes to compromise the integrity of the stockpile. Events affecting storage have the potential to involve large amounts of agent, for example an entire igloo could be affected. These types of accident scenarios are low frequency events, but have significant consequences to the public due to the release of large quantities of agent to the environment. In addition, the degradation of the chemical agent stockpile requires intense management that results in significant manual handling of the munitions, thus exposing our workers to the risk of agent exposure.

The disposal facilities are exposed to the same external events that the storage area is exposed to, but there are limited munitions in the process at any time so the potential agent releases are limited. The disposal process is carried out in a facility with multiple layers of protection to prevent agent release to the environment. The disposal facilities have also been designed and built to minimize the effects of external forces, such as tornadoes and earthquakes. The Program Manager for Chemical Demilitarization has conducted and continues to conduct risk assessments to understand and minimize the risks of storage and processing. The risk decreases with each round and agent container destroyed. Both an independent panel of experts (which included local risk experts) and the National Academy of Science's National Research Council have and continue to rigorously oversee the risk assessment processes. The information from these assessments is the driving force behind the demilitarization program and its goal to eliminate this risk by destroying the source—the chemical weapons stockpile.

COST SAVINGS

Question. Has the program realized any cost savings through innovation or the use of better business practices during its life cycle?

Answer. While the program has not realized any true cost savings, the program manager has undertaken many management initiatives to contain program costs through innovative or better business practices. For example, the aggressive lessons learned program has helped to avoid schedule and cost growth for the Chemical Stockpile Disposal Project. Similarly, the Non-Stockpile Chemical Materiel Product has controlled costs by employing alternative solutions to address mission requirements, for example, the early destruction (fiscal year 1999 versus fiscal year 2006) of binary M–687 projectiles, thus avoiding inflation cost increases.

MEETING THE PROGRAM SCHEDULE

Question. Where do you stand in terms of compliance with the Chemical Weapons Convention (CWC) and will you meet the next milestone in April 2002?

Answer. The program continues to meet or exceed requirements of the CWC. By April 29, 2000, we are required to have destroyed one percent of our Category 1 chemical weapons that were declared at the time of the treaty's entry into force. By that date, we will have well exceeded that milestone, having destroyed over 15 percent of those weapons. To date, the United States has destroyed approximately 19.7 percent of the Category 1 chemical weapons (CW) since the CWC entered into force. The Category 1 phase 1 deadline requires at least 20 percent destruction no later than April 29, 2002. It is expected that the United States will have safely destroyed 20 percent of Category 1 CW by the end of fiscal year 2001, well ahead of schedule.

For Category 3 CW, 100 percent destruction is required by April 29, 2002. Category 3 CW are unfilled munitions or components that were designed for use directly in connection with the employment of chemical weapons. Presently, 99 percent of the Category 3 CW have been destroyed, and the remainder are on target for destruction by 2002. Destruction of 40 percent of the production capacity of former chemical weapons production facilities is also required by April 29, 2002. This milestone was met in March 2000.

QUESTIONS SUBMITTED BY SENATOR RICHARD C. SHELBY

EMERGENCY PREPAREDNESS

Question. Has the Army changed its objective from "zero exposure" to "zero fatalities?"

Answer. The Program Manager for Chemical Demilitarization has always maintained the goals of zero release—zero exposure during chemical weapons disposal operations. However, recognizing the low probability for agent release will continue as long as the chemical weapons remain in storage, the Army and Federal Emergency Management Agency jointly manage the Chemical Stockpile Emergency Preparedness Program (CSEPP) in coordination with state and local officials. The Army has consistently followed the same objective for the protection of the general public from a chemical agent accident since 1991. This objective is defined in CSEPP Policy Paper Number 1, dated May 1991, which was developed jointly by the Army, the Federal Emergency Management Agency and the ten CSEPP states. Policy Paper 1 states that the most important objective is the avoidance of fatalities to the maximum extent practicable. CSEPP achieves this objective through protective actions that protect the public from exposure to chemical agents to the maximum extent practicable.

Question. Does the Army believe that people will be exposed to chemical agents?

Answer. The Army does not believe that people will be exposed to chemical agent, either from storage activities or from chemical demilitarization operations. First, the probability of a chemical weapons accident that could put the public at risk is extremely low. Second, the Army and the Federal Emergency Management Agency are working with state and local emergency management officials to enhance their emergency response capabilities. Improving emergency response capabilities further reduces the risk of exposure to chemical agents and protects the public from exposure to the maximum extent possible.

MEDICAL STUDIES

Question. What medical studies or data can you share with this committee regarding the long-term health impacts of non-lethal exposure to chemical agents?

Answer. A number of studies have been published on the long-term health effects of non-lethal exposure to nerve and mustard chemical agents. Some of those studies are listed below.

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15. NRC (National Research Council), Possible Long-Term Health Effects of Short-term Exposures to Chemical Agents. Volume 3, Final Report, Current Health Status of Test Subjects, National Academy Press, Washington D.C., 1995.
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17. Sidell, FR and Groff, WA. The reactivity of Cholinesterase inhibited by VX and Sarin in Man. Toxicol Appl Pharm, Vol 27, pages 241–252 (1974).
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ALTERNATIVE TECHNOLOGIES

Question. Given the state of the program in Anniston does a faster, cheaper and safer alternative exist to eliminate these weapons?

Answer. No, the incineration facility being constructed at Anniston represents the only proven systemized technology available now to dispose of assembled chemical weapons. Incineration technology has been demonstrated to safely and effectively destroy all of the chemical agents and energetics, as well as completely treat contaminated metal munition casings. The Army continues to track emerging technologies in an attempt to identify alternatives to incineration that may be faster, cheaper, and offer more protection.

The Anniston disposal facility is 99 percent complete and we are scheduled to start agent operations in the third quarter of fiscal year 2002. It would take numerous years to develop the systems, design a facility, obtain the requisite environmental permits, construct the facility, and prove-out the alternative technology(ies). In that time alone, using the incineration facility being constructed at Anniston, we could eliminate 90 percent of the risk associated with the Anniston stockpile. Incineration has been proven to be a safe technology as we have completed the Johnston Atoll Chemical Agent Disposal System mission and continue operations at the Tooele Chemical Agent Disposal Facility.

Lessons learned from these facilities have been incorporated into the facilities currently being built, continuing to add to the safety of the Anniston facility and operations.

Question. What is your response to opponents of incineration who would like to see the facility in Anniston retrofitted for alternative technologies?

Answer. The Army's paramount objective during the storage and destruction of chemical weapons is to provide maximum protection to the public, the workers, and the environment. All risk analyses prepared to date have shown continued storage poses the greatest threat to the local community. The risks are dominated by external events such as seismic events, lightning strikes, or tornadoes. While the possibility of these events occurring are extremely remote, the consequences could be severe. However, the Army is continuing to identify alternative technologies that may be faster, cheaper, and offer more protection. At this time, pilot testing of an alternative technology would be necessary since no alternative technology has been used in full-scale operations. The construction of an alternative technology pilot-scale facility would take at least 18 months from the time all permits were received. In that time alone, by operating the incineration facility being constructed at Anniston, 90 percent of the risk associated with the Anniston stockpile would be eliminated. Retrofitting facilities nearing completion will only increase risk to the public by delaying the destruction of the stockpile. If at some point in the future, an alternative technology is demonstrated to be appropriate for consideration for retrofitting the

Anniston facility, the local community would be encouraged to participate in that decision.

QUESTIONS SUBMITTED TO MIKE PARKER

QUESTIONS SUBMITTED BY SENATOR ARLEN SPECTER

ASSEMBLED CHEMICAL WEAPONS ASSESSMENT (ACWA) TECHNOLOGY

Question. In order for an ACWA technology to go to pilot testing, ACWA must certify its technologies are as safe as and as cost effective as incineration, and that weapons will be destroyed on or before incineration or CWC deadline, whichever is later. What have the Arthur Andersen, General Accounting Office, and National Resource Council (NRC) reports concluded about ACWA's ability to meet these criteria? Will you meet the cost considerations? Will you meet the treaty or incineration schedule deadlines?

Answer. The scope of the Arthur Andersen, Government Accounting Office, and the NRC efforts were focused on other program needs and Congressional objectives rather than a comparison of the technologies per the requirements of Public Law 105–261. The NRC's report, which is technology focused, will be included in the Defense Acquisition Executive review process that will be completed this calendar year. The NRC report will be published in July 2001.

One of the objectives of this Defense Acquisition review will be a side-by-side comparison of the alternative technologies and the incineration-based technologies per Public Law 105–261. Given that the plants for either technology approach will be about the same size with a similar workforce and operations period, and they will be using similar equipment to separate the energetic and agent components from the munitions, their cost, schedule, and safety will be roughly equal.

Question. Are any ACWA technologies ready to go to the pilot-testing phase? If so, which ones and on what date will this occur?

Answer. Four successfully demonstrated alternative technologies have been determined to be possible candidates for pilot testing. The ongoing Defense Acquisition Executive review process will determine if any of these technologies should be piloted consistent with Public Law 105–261, and if so, where. The Defense Acquisition Executive's initial decision regarding pilot testing of ACWA technologies is scheduled to be made in the first quarter of fiscal year 2002. The technology decisions for Pueblo, Colorado, and Blue Grass, Kentucky, are scheduled to be made in the first quarter of fiscal year 2002 and the third quarter of fiscal year 2002, respectively, and will consider construction of full-scale ACWA technology disposal facilities to be operated initially at the pilot-scale, as alternatives.

Question. ACWA technologies engineering design studies are to be completed in July 2001. Can you assure the committee that these reports will be complete and final at that date?

Answer. The Engineering Design Study Phase I testing will be completed in October 2001. The test reports will be available within six weeks of completing testing. The Engineering Design Study Phase II testing will be completed in November 2001 with the reports finalized six weeks later.

QUESTIONS SUBMITTED BY SENATOR RICHARD C. SHELBY

ALTERNATIVE TECHNOLOGIES

Question. Given the state of the program in Anniston does a faster, cheaper and safer alternative exist to eliminate these weapons?

Answer. Hard facts to answer this question are yet to be developed. One objective of the Defense Acquisition Executive review is to compare the alternative technologies' cost, schedule, and safety with the baseline incineration process and determine if an alternative should be piloted and where. If one or more alternative technologies were successfully piloted, an engineering analysis to determine the practical feasibility of retrofitting an alternative technology to the Anniston facility would need to be completed along with the cost, schedule, and safety implications of retrofit to address these issues. Once this information is available, there would need to be a comparison with the updated baseline facility operating and cost schedule using the operating experience at the Johnston Atoll Chemical Agent Disposal System and the Tooele Chemical Agent Disposal Facility to determine the life cycle cost and schedule implication of an alternative technology applied at Anniston.

Question. What is your response to opponents of incineration who would like to see the facility in Anniston retrofitted for alternative technologies?

Answer. Safety is the paramount issue with chemical weapons storage and disposal. The most significant risk to the local population at a site would be a weapons in storage accident. While the probability is very, very small that any accident will occur, the accident that could effect the off-installation population would be due to a natural event such as an earthquake or lightning strike. Given that natural events such as these could occur at any given time, then the timeline for disposal drives the safety risk. Shortest time for disposal is the lowest risk. The time to dispose of chemical weapons based on the actual experience at Johnston Island and at Tooele would need to be compared to the time line to retrofit to an alternative technology that may dispose of the weapons more efficiently. If one or more alternative technologies were successfully piloted, an engineering analysis to determine the practical feasibility of retrofitting an alternative technology to the Anniston facility would need to be completed along with the cost, schedule, and safety implications of retrofit to address these issues. The answers would need to be developed in a totally transparent manner that assures your constituents that they have all of the unvarnished facts to obtain community buy in on what ever the right course of action is.

NONDEPARTMENTAL WITNESSES

Senator INOUYE. Now our second panel will consist of Mr. Russell Salter from FEMA and representatives from the Blue Grass and Anniston areas. Representing the Chemical Weapons Working Group is Mr. Craig Williams. From Anniston are Mr. Rufus Kinney and Ms. Brenda Lindell of Families Concerned About Nerve Gas Incineration; and Eli Henderson, former commissioner of Calhoun County.

Pursuant to the instructions of the chairman, I now relinquish the chair to Senator Shelby. You are in charge, Senator.

Senator SHELBY [presiding]. Thank you.

All of your written statements will be made part of the record without objection. If we could, because of the constraints of time, would you briefly sum up your remarks and that will give us some time for some questions and a little dialogue with you.

We will start with Mr. Russell Salter. Mr. Salter.

STATEMENT OF RUSSELL SALTER, DIRECTOR, CHEMICAL AND RADIOLOGICAL PREPAREDNESS DIVISION, FEDERAL EMERGENCY MANAGEMENT AGENCY

Mr. SALTER. Thank you, Mr. Chairman. Mr. Chairman and members of the subcommittee, I am Russell Salter, Director of FEMA's Chemical and Radiological Preparedness Division at FEMA. Since August of 1997, I have served as the agency's national program manager for the chemical stockpile emergency preparedness program.

I am pleased to be here today on behalf of FEMA and on behalf of Director Joe Albaugh. I am here at your request to answer any questions that you may have about our national CSEPP program or those concerning the safety of communities in and around any of the particular sites. I have provided the committee a more detailed written statement that discusses CSEPP from a national perspective.

Since the focus of this hearing is on chemical demilitarization, my brief comments today will address the status of public protection in the CSEPP communities in both Kentucky and in Alabama, information that I believe is relevant, Mr. Chairman, because of the relationship that exists between chemical storage and destruction and protection of the public.

In late March I provided the committee a status report that presented each State's assessment of their level of preparedness for a CSEPP emergency. Most of the communities in the report indicated that they had completed or were well on their way toward completing and maintaining all 12 of the benchmarks that had been established for determining readiness in the communities.

Kentucky's self-assessment indicated that all but two of their benchmarks were essentially complete. This means they have the

ability to alert the population, State and local response and emergency management staff can effectively communicate in order to guide the protective action process, plans and equipment are in place, and operations centers are equipped to handle a CSEPP emergency.

According to Kentucky's assessment, the two significant items that remain are the need for more public awareness so they can be assured that the local citizens know what to do in an emergency; and, secondly, greater emphasis on training to make up for some shortfalls over the past year. We applaud the hard work that the State has done, and the county personnel as well, to provide this level of preparedness.

In the most recent report, Alabama's self-assessment, which includes six counties in and around the Anniston Chemical Depot, reported that only 4 of their 12 benchmarks are complete. We cannot agree with this assessment, Mr. Chairman. Since the beginning of the CSEPP program, we have awarded the State of Alabama more than $118 million for public protection. These funds have provided a robust alert and notification system, mobile communication radios, plans, state of the art emergency operations centers, automation support, and substantial funding for collective protection.

We do recognize that work remains to be done and we feel that the States and counties need to aggressively work toward completion of all of those remaining projects which we have funded. Meanwhile, however, based on the resources that they now have available to their communities, we must conclude that the Anniston community, like Kentucky, is well prepared for a CSEPP emergency. Given their state of preparedness, in our judgment the emphasis in Alabama, as in Kentucky and many other sites, needs to now be directed toward improving public awareness so that the citizens know the true risks and what to do in the unlikely event of a CSEPP emergency.

Public understanding about what to do and why it is important that they follow protective action recommendations during a CSEPP emergency is a critical component of readiness, in our view. Consequently, we believe that it is time that we join together at the Federal, the State, and the local level to provide clear and factual information to the public that will enable them to protect themselves and to make informed judgments regarding their safety during both storage and destruction of the stockpile.

In closing, through our collective efforts I am confident that we can protect the citizens in the counties surrounding the stockpiles in the event of a chemical agent release. This is significant, Mr. Chairman, because according to the Army the risk to the public during storage is greater than the risk during destruction. Destroying the stockpile eliminates that risk. Working toward that end should be our collective goal.

PREPARED STATEMENT

I would be pleased to answer any questions you may have. Thank you.

[The statement follows:]

PREPARED STATEMENT OF RUSSELL SALTER

Mr. Chairman, and Members of the Committee, I am Russell Salter, Director of the Federal Emergency Management Agency's (FEMA) Chemical and Radiological Preparedness Division. I am pleased to provide this statement to the Committee that addresses FEMA's role in support of the Chemical Stockpile Emergency Preparedness Program (CSEPP). My statement will cover: FEMA's mission and its roles and responsibilities in CSEPP; the structure and operation of the program; and, improvements in emergency preparedness in the communities surrounding the stockpile sites since the program began in 1988.

FEMA'S MISSION

FEMA's overall mission is to reduce the loss of life and property and protect our institutions from natural and technological hazards by leading and supporting the nation in comprehensive, risk-based emergency and consequence management programs of mitigation, preparedness, response and recovery. FEMA accomplishes this mission in cooperation with other Federal Departments and agencies, States, Tribal Nations, local governments, private and volunteer organizations.

Emergency management funds provided by FEMA through grants to States, Tribal Nations and local governments ensure that, regardless of the cause, emergency managers can determine when an emergency is occurring, assess and predict its impact, communicate rapidly to the emergency management community and first responders, broadcast effective messages to inform the affected population, determine appropriate public health and safety strategies, and, if required, evacuate and house the population.

CHEMICAL STOCKPILE EMERGENCY PREPAREDNESS PROGRAM (CSEPP)

In 1985, Title 14, Part B, Section 1412 of Public Law 99–145, directed the Department of Defense (DOD) to dispose of its lethal unitary (pre-mixed) chemical agents and munitions while providing "maximum protection for the environment, the general public and the personnel involved in the destruction of lethal chemical agents and munitions . . ."

While the possibility of a chemical stockpile incident with off-post consequences is remote, the Army recognized that the effects could be significant.

In its final programmatic environmental impact statement, the Army recognized that one of the ways to protect the public from the effects of an off-post incident was to assist States, Tribal Nations and local governments in improving their emergency preparedness. In response to congressional direction to protect the public during the destruction of the chemical agents, the Army sought funds to support a site-specific emergency planning program for off-post communities located within those 10 states that could be impacted by the off-post release of chemicals during storage or destruction. Thus CSEPP was established.

Because the Army was not authorized to provide funds directly to States, and did not have the infrastructure to manage the program, it looked to other Federal agencies for support. FEMA's ongoing emergency preparedness programs uniquely positioned the Agency to reach out to State, Tribal Nations and local governments and assist DOD in meeting the "maximum protection" mandate. Therefore, FEMA joined the Army in implementing the CSEPP through a Memorandum of Understanding (MOU) signed in August 1988.

While Congress mandated "maximum protection," the intent of this mandate was not further defined. Thus, FEMA and the Army developed operating guidelines to assure that the congressional mandate is achieved. I will further discuss how these guidelines have been implemented later in this testimony.

A strong comprehensive emergency preparedness program is the cornerstone to meeting the maximum protection mandate. FEMA and the Army have developed high standards to achieve the maximum protection objective. Maximum protection has been achieved when all these standards are met.

FEMA'S CSEPP RESPONSIBILITIES

Management of CSEPP is a unique partnership among the U.S. Army, FEMA, supporting Federal Departments and agencies, and States, Tribal Nations, and local jurisdictions. The Federal-level management structure is uniquely designed to capitalize on each Department or Agency's expertise and administrative infrastructure to develop and enhance the emergency preparedness capabilities of the participating jurisdictions.

The August 1988 Memorandum of Understanding established the framework for working with affected States, Tribal Nations and local governments to provide for

the public's health and safety. The MOU identified respective roles and responsibilities and established joint programs to plan, train and exercise and exchange information. FEMA and the Army reaffirmed this original Memorandum of Understanding in January 1993.

As the program matured, FEMA and the Army realized that the respective roles and responsibilities needed clarification. On October 8, 1997, FEMA and the Army signed a revised MOU.

Under the terms of this MOU, FEMA is responsible and accountable for all aspects of off-post emergency preparedness.

Specifically, FEMA: Administers off-post CSEPP funds; supports development of response plans; prepares, develops, delivers and evaluates training; provides technical assistance; and develops programs to evaluate off-site readiness capability.

PROGRAM STRUCTURE

Ten states and 40 counties surrounding eight U.S. Army stockpile sites participate in CSEPP. The eight States with chemical stockpiles are Alabama, Arkansas, Colorado, Indiana, Kentucky, Maryland, Oregon and Utah. Illinois and Washington also participate in the program because of their borders' proximities to the Indiana and Oregon stockpiles.

Thirteen counties are in Immediate Response Zones, the areas closest to where the chemical agents are stored, generally within approximately a 10-mile radius.

Twenty-four counties are in Protective Action Zones, beginning at the outer edge of the Immediate Response Zones and extending to a radius of approximately six to 31 miles. The remaining three counties are designated as host counties, which lie outside the Immediate Response Zones and Protective Action Zones.

The CSEPP Program is administered through the States, as are FEMA's other emergency preparedness programs. Funds are distributed under Cooperative Agreements, based on a work plan negotiated between the States and FEMA Regional Offices. Under the agreements, each State identifies needs, develops proposed projects, requests funds, and disburses the funds at the State level and to local governments. Consistent with the requirements of the Government Performance and Results Act, States are responsible for financial accountability, and periodically report on the capability improvement realized through utilizing the funds.

This management structure is consistent with and supportive of the authority and distribution of powers within most States, where the State government, rather than counties or municipalities, is ultimately responsible for protecting the health and safety of the state's citizens.

At the Federal level, FEMA and Army Headquarters are responsible for CSEPP policy and program development, while the FEMA Regions and the Army Soldier and Biological Chemical Command manage daily operations. Site-specific issues are handled through site-specific Integrated Process Teams. These teams (required by Section 1076 of Public Law 104–201, the Department of Defense Authorization Act for 1997) are the primary local forum to identify site-specific operational issues, propose solutions to those issues to the appropriate decision makers, and implement program and operational decisions.

CSEPP MANAGEMENT SYSTEM

CSEPP has been developed from two perspectives. First, it focuses on providing necessary equipment and staff training to establish a response infrastructure that enables emergency managers to quickly alert the public, manage the response, and communicate with the public, the media, and emergency responders. The second equally important focus is to ensure that the public surrounding the stockpile locations know what to do in the unlikely event of an accident.

FEMA is responsible for carefully evaluating requests from the States and communities to achieve "maximum protection" capability within the limits of funds provided. As such, our goal is to deliver maximum available resources to the local communities facing the most significant potential threat. However, we have had to ensure cost-efficiencies in procurement and compatibility between major systems that benefit multiple jurisdictions. In many cases, this has meant procurement at the state level for alert and notification, communications and automation systems. Moreover, we must ensure effective program management at the Federal level to maintain consistent capabilities across all jurisdictions.

As of April 4, 2001, $411,301,608 has been awarded to the States under the annual Cooperative Agreements.

CSEPP BENCHMARKS

In May 1993, the Army and FEMA jointly established National CSEPP Benchmarks.

The benchmarks identified capabilities to be achieved by participating State and local jurisdictions in meeting the "maximum protection" mandate. These benchmarks also are the basis for funding decisions, establishing program priorities and assessing capabilities. The following benchmarks are essential and must be in place:

—Alert and notification system for the installations, Immediate Response Zones and limited areas of the Protective Action Zones;
—Emergency operating center for each installation and Immediate Response Zone county;
—Communications system for the Immediate Response Zones and installation and between the military installation, Joint Information Center and the State; and
—Automated data processing system connecting critical installations, on-post and off-post emergency operations centers, Joint Information Center and the State emergency operating center.

In addition, the benchmarks also prescribe the following functional capabilities:

—Training programs, consistent with the FEMA State Training Plan and Army certification requirements, that maintain proficiency of emergency services providers, responders and CSEPP staff, as defined and measured by the CSEPP standards;
—An exercise program consistent with approved exercise policy;
—A community involvement program for public information and education; and
—Coordinated plans that conform to established CSEPP Guidance for each installation, State and Immediate Response Zone and Protective Action Zone, updated as CSEPP guidelines are revised or the jurisdiction's circumstances change.

Over the last several years, it has become apparent that personal protective equipment for emergency support personnel, and decontamination equipment are also central to operations at many sites. Therefore, in addition to the eight CSEPP benchmarks, protective equipment and decontamination have been identified as preparedness components.

IMPROVEMENTS TO DATE

Significant accomplishments have been achieved in community preparedness surrounding the stockpile sites. As demonstrated below, stockpile communities are clearly better prepared today than when FEMA entered the program in 1988.

Staffing

CSEPP funds approximately 280 staff at the State and county levels. Personnel include planners, trainers, health professionals, automation experts, and logistical personnel. Thus, CSEPP not only provides significant equipment to respond to a chemical event, but also pays for the staff required to manage the program on a daily basis.

Planning

Guidelines for emergency response preparedness to a chemical stockpile incident are contained in the Planning Guidance for the Chemical Stockpile Emergency Preparedness Program. The CSEPP Planning Guidance was most recently revised in May 1996 and covers all program areas.

In addition, a variety of planning tools were developed for use by State, Tribal and local jurisdictions. These include a dispersion model to predict downwind hazards, an evacuation modeling system to assist in estimating evacuation times, and a protective action dose reduction estimator used to develop protective action strategies.

CSEPP-specific emergency response plans have been developed by all participating CSEPP jurisdictions. The focus has now shifted to assure that all the plans are fully integrated among jurisdictions; and that the plans incorporate specific provisions to select appropriate protective actions, to protect special populations and to provide support to people who must evacuate.

In addition to developing jurisdiction-specific emergency response plans, preparing for a CSEPP emergency requires that various jurisdictions integrate their response activities. The preferred method to ensure integration is to have agreements in place between the jurisdictions before a response is required. These agreements can cover response activities such as fire fighting, daily information exchange between the on- and off-post communities, and agreements between the community and the Red Cross to shelter evacuees. A CSEPP workgroup developed and distributed guid-

ance for drafting and negotiating a variety of general and CSEPP-specific agreements.

ENHANCED RELATIONSHIPS

CSEPP requires a partnership approach as evident in the numerous cooperative activities and planning efforts among the installations, the communities surrounding the stockpile sites and the States. Among the signs of increased cooperation are monthly or quarterly site-specific Integrated Process Teams that bring together all affected parties; an approved accident classification system; and dedicated communications links between the installations and local government. Finally, on- and off-post jurisdictions continue to participate in joint CSEPP training and exercises.

Alert and Notification

Alert and notification relies on two separate and distinct steps: (1) alerting the public; and (2) providing the public with information concerning appropriate protective actions. The CSEPP alert and notification system consists of a network of outdoor warning devices (generally voice capable sirens) covering populated areas of the Immediate Response Zones, which are used in conjunction with indoor devices in residential dwellings and special facilities.

Major strides have been made in alert and notification since the inception of CSEPP. When CSEPP began, a majority of the States and counties employed some form of route alerting (such as loud speakers on roving vehicles), along with the Emergency Broadcast (now, Emergency Alert) System. Sirens were rare. Today, approximately 500 sirens, most with voice capability, have been installed and are operational within the CSEPP counties. These sirens are quicker and much more effective than previous methods for alerting the general public.

Three types of indoor receivers are approved for use in CSEPP: specially designed Tone Alert Radios; National Oceanic and Atmospheric Administration weather radios; and Emergency Alert System-capable receivers. Regardless of the type of indoor radio selected—for purposes of this testimony, they will all be considered under the umbrella term Tone Alert Radios—the indoor alerting device must provide both an alert signal and verbal information. To date, nearly 35,000 Tone Alert Radios have been installed CSEPP-wide.

Emergency Operations Centers

Gathering all officials with key command and control responsibility at a central location is critical to an effective response. Thus, CSEPP has provided funds to build or renovate approximately 20 Emergency Operations Centers. These centers combine physical facilities, equipment, personnel and procedures to facilitate coordinated management of a jurisdiction's emergency response. At this time, all centers are operational and conform to CSEPP standards. In fact, they also are being used for exercises and real-world emergencies.

Communications Systems

Improved communications networks exist in all Immediate Response Zones and Protective Action Zone counties. While communication methods vary from site to site, communication systems are fully operational at this time.

Automated Data Processing

Early on, integration of state-of-the-art automated data processing into CSEPP was considered to be essential to meet the maximum protection requirement. While every site has an operational, integrated Automated Data Processing system, selected installations currently use the Emergency Management Information System, while many off-post communities have switched to the newer Federal Emergency Management Information System.

The Federal Emergency Management Information System allows for pre-incident planning, development of categories of protective action recommendations and daily electronic messaging. In the event of an emergency, the system will be used for chemical event notification, consequence analysis and automatic warning activation. It also contains plume-projection capabilities, a geographic information mapping system, and fully integrated electronic checklists and message boards.

Personal Protective Equipment

CSEPP avoids placing off-post emergency workers in harm's way. In fact, it is our policy that these workers never enter the chemical threat plume area as identified by our very conservative downwind hazard prediction software. However, as an added precaution, we have funded Level C Personal Protective Equipment ensembles that include a chemical protective suit, powered air purifying respirator, gloves

and boots. This equipment, along with the necessary training, is provided to off-post emergency workers who, as an example, man traffic and access control points, and medical workers.

To date, over 5,000 protective equipment ensembles have been provided to protect CSEPP's emergency workers.

Decontamination Equipment

In the event that emergency workers or the general population were exposed to liquid agent contamination, CSEPP provides training and equipment for decontamination. Approximately 45 fixed or mobile decontamination facilities have been provided to the communities.

Collective Protection

In some cases, special, congregate populations in the Immediate Response Zones may not be able to evacuate in a safe and/or timely fashion should a release occur. In such cases, CSEPP has funded enhancements to the facilities these special populations occupy. These collective protection enhancements are comprised of expedient (shelter-in-place kits) sheltering, enhanced sheltering, use of recirculation filters and over-pressurization.

Expedient sheltering allows an individual to cover facility windows with plastic and seal the edges with tape, at the time of a chemical agent release. Enhanced sheltering involves permanent improvements to a facility's structure, such as additional caulking and improved ventilation closures. These deliberate enhancements are accomplished in advance as an emergency preparedness measure. Over-pressurization involves the installation of positive pressure ventilation and filtering systems in a facility to keep its ambient atmosphere free of agent.

Over-pressurization is the most protective of collective protection measures, but it also is the most expensive, intrusive, and time consuming (in terms of construction) to implement. Decisions on which collective protection strategy to use are based upon such considerations as the extent of threat to the facility population, and ability to implement a strategy prior to destruction of the threat. CSEPP has funded over-pressurization for approximately 30 special facilities. Enhanced and expedient sheltering has been provided for many other structures.

Training

Training has been a valuable link among the counties, installations and the States. Twenty-two CSEPP specific training courses have been developed since CSEPP specific training was first initiated in 1990. These 22 courses provide instruction in six general categories: basic CSEPP orientation; self and casualty care; planning; protective action decision making; public affairs; and communications. Roughly 30,000 people have enrolled in CSEPP-related emergency preparedness and response training programs. The majority of those trained are at the county level. While courses are developed at the National level for program-wide consistency, local participants remain the target audience. [Note: The number of enrollments is likely to exceed the actual number of people trained because some individuals have taken more than one course.]

Each state has an Exercise and Training Officer who works directly with the counties and often with the installation to enable CSEPP personnel to meet the standards and procedures developed by the program. Based on needs identified by local officials, early training focused primarily on CSEPP orientation, planning, response, public affairs and medical preparedness. As new operating systems were installed and additional standards and procedures developed, training has addressed these new needs identified by local officials. For example, recent training covers decontamination, personal protective equipment, and use of auto injectors.

Exercises

The CSEPP exercise program tests local, installation and State emergency operations plans and the jurisdictions' capabilities to implement those plans. Through 1998, the mandatory annual exercises were always Federally conducted, managed, and evaluated to meet a certain set of criteria. Moreover, Federally Managed Exercises are designed and managed on-post by an Army co-director and off-post by a FEMA regional co-director. The extent of play was negotiated between the FEMA co-director and the off-post communities.

In 1999, the exercise criteria were revised so that CSEPP communities can opt to design and conduct a state-led exercise every other year. This training oriented Alternate Year Exercise allows CSEPP communities to design site-specific exercises at the State and local level to focus on specific interests or concerns. To date, more than 70 CSEPP exercises have been conducted.

Public Information and Education

Public education and information programs can present a major challenge. At the core of this challenge is our ability to earn the public's trust and confidence that the Federal, State and local partnership can and will protect those who live and work near the chemical weapons stockpiles.

In 1988, few formal off-post chemical stockpile-specific public education and emergency public information programs were in existence in the eight stockpile communities. Over the years, FEMA has led a pre-emergency public awareness campaign targeting the public, community leaders, interested organizations, and the media. At the same time, FEMA has helped CSEPP communities and States establish procedures for timely, accurate, and coordinated dissemination of information to the public in the event of an actual stockpile emergency.

Today, all CSEPP states and Immediate Response Zone counties have CSEPP-funded staff to handle public education and information needs. CSEPP educational and informational materials, such as calendars, brochures and information sheets, have been distributed throughout the CSEPP communities. Site-specific videos explaining alerting procedures and appropriate protective actions have also been distributed to each of the CSEPP sites.

We worked hand in hand with the Umatilla Public Affairs group to craft a media campaign designed to educate citizens about protective actions. Survey results show that residents credit the outreach campaign for giving them a better understanding of protective actions, such as shelter in place. Oregon's successful outreach campaign soon will be implemented nationwide.

The Joint Information Center is a permanent central facility activated in an emergency to facilitate the coordination and compatibility of information disseminated by the various agencies and jurisdictions to the public and media. These centers are an integral part of CSEPP. They operate in all CSEPP communities except Aberdeen, Maryland. Instead of establishing a permanent location, the Aberdeen community has chosen to center its media operations in a mobile unit. Samples of and guidance for Emergency Alert System messages have been distributed. The CSEPP counties also have pre-scripted protective action recommendation messages

CHALLENGES

Site-specific Issues

At the federal level, we believe that we have provided the necessary funding and support to achieve the preparedness goals at all CSEPP sites. A series of meetings were held during the past year between FEMA, Army, and State and local officials in Anniston, Alabama. While much headway has been made to purchase additional sirens and Tone Alert Radios, initiate a local public education campaign, purchase and distribute shelter-in place kits and upgrade the Emergency Alert System for all Alabama CSEPP counties, several issues remain unresolved. Despite the constructive engagement of dialogue that has taken place, in some cases, State and local requests cannot be fully funded due to fiscal constraints imposed by life cycle cost estimates for the project. In other cases, State and local requests have been determined by independent analysis and study to provide no additional protection to the public.

FEMA and the Army are committed to fulfilling commitments made as recently as November 2000 for public safety enhancements and to resolving the remaining issues. However, as technical studies have repeatedly shown, the risk to the public safety from continued storage of the chemical stockpile at the Anniston Chemical Depot far exceeds the risk of disposal operations, and the best way to ensure maximum protection of the citizens living in the Anniston community is the prompt and complete destruction of this stockpile without delay.

In Madison County, Kentucky, community representatives help us to identify collective protection needs. Madison County has taken the lead in public education by visiting schools, and numerous community organizations. Eastern Kentucky University also plays a major role by providing technical assistance and training.

Public Education

It is clear that the public will continue to differ in their degree of involvement and interest in the program. The public's lack of involvement poses difficulties in educating them on what to do in the event of a CSEPP emergency. Specifically, on a number of occasions, residents surrounding the stockpile sites lacked knowledge regarding what to do in a CSEPP emergency. When questioned, many of these same people admit that while they are aware of the informational resources available in their communities (including public information storefronts), they have not availed themselves of this information. Our attempt to overcome this disconcerting trend is a central component of an aggressive national media strategy.

Risk Communication

Appropriate, effective and frequent dialogue with the affected public about risks is a continual focus for the CSEPP. How that information is interpreted or modified by existing beliefs remains problematic. To enhance risk communication efforts, we continually strive to discuss risk in a manner easily understood by the majority of the public.

Collective Protection

While the equipment and/or renovations required to complete expedient and enhanced sheltering are relatively inexpensive and can be installed rapidly, over-pressurization requires renovation of the entire ventilation and filtering systems and are extremely time consuming. Our goal is to protect public health and provide for their safety. However, since over-pressurization is a highly effective method to provide public protection, we support its use where warranted. Since continued storage is a much greater risk than destruction, the only way to eliminate the public's risk completely is to eliminate the stockpile. Therefore, we are concerned that delays in collective protection projects could increase public risk.

CONCLUSION

Nearly all major systems are in place and operational. Remaining improvements will be put in place to meet the congressional mandate of maximum protection as soon as possible. In the near future, all sites will enter the maintenance phase, which will continue until all the chemical weapons stockpiles are destroyed.

FEMA is committed to ensuring the successful implementation of the CSEPP and protecting the health and safety of our citizens. This has been, and continues to be, a formidable task. As previously stated, "maximum protection" is the most stringent requirement of any emergency preparedness program directive, but we are confident that the Federal, State, Tribal, and local emergency management community can meet the challenge.

Significant gains have been made since 1988 in the abilities of the CSEPP States, Tribal Nations and local jurisdictions to respond to a chemical weapons incident. These improvements aid CSEPP communities in protecting their citizens from the full range of natural and technological hazards they face. We are thankful to the CSEPP communities for their commitment and dedication to this important program, and pledge to continue to work with them until the risk of a chemical stockpile incident no longer exists.

STATEMENT OF CRAIG WILLIAMS, DIRECTOR, CHEMICAL WEAPONS WORKING GROUP

Senator SHELBY. Mr. Williams.

Mr. WILLIAMS. Yes, good morning, Mr. Chairman, members of the committee, Senator McConnell. I appreciate the opportunity to present testimony before you today. I am Craig Williams, Director of the Chemical Weapons Working Group, the CWWG. It is a coalition of over 160 organizations that support the destruction of chemical weapons in a manner that does not destroy the health of our communities or the environment and is implemented in an open and honest process.

The Working Group is very supportive of the international campaign to ban these weapons and destroy them, the Chemical Weapons Convention. However, we do prioritize the wellbeing of our communities above any deadline, whether it be national, international, Congressional. Our communities come first.

I come before you today with a message. The Program Manager for Chemical Demilitarization Office, the agency responsible for carrying out the chemical weapons program, in our opinion has run amok. Although I consider many individuals there to be hard-working and honorable people, the current structure and leadership in PMCD is more concerned with defending its own bad decisions than ensuring the maximum protection of the public, as directed by Congress.

Mr. Chairman, members, the Guiness Book of World Records cites VX chemical agents as "deadliest substance in the world." It is not a material that should be put in the care of an agency that chronically misrepresents facts to the Congress and to the American people. Yet I will present to you evidence of systemic misrepresentation of technical capability, schedule compliance, cost, permit fraud, fiscal mismanagement, and outright lies to the citizens and to you, the Congress of the United States.

First let me begin with what PMCD claims is their capability to meet the chemical weapons deadlines, treaty deadlines. The schedule of disposal operations as offered to Congress in September of 2000 and repeated here today shows that the operational period for all four incineration sites, ending by January 2007, 3 months before the treaty deadline. Colorado and Kentucky, as has been pointed out, could vary from that. The 1999 status report submitted to Congress by PMCD shows Kentucky and Colorado being close to the deadline of April 2007, thereabouts, and again we heard that testified to this morning.

In the packet of information that I provided to you is an internal report produced by PMCD which shows that these representations are knowingly false. The report, entitled "Operations Schedule Task Force Report 2000, Final Report," is accompanied by a memo to the project manager for chemical stockpile disposal and copied to every high-ranking person in PMCD. It also has a concurrence page that is signed off on by each task force member.

Since the CWWG received this report through unofficial channels, we have consulted with three experts with a cumulative total of more than 50 years of experience in chemical weapons-related activities. Based on that report, the Chemical Weapons Working Group developed a methodology and a set of calculations which resulted in the actual operational schedule on the chart I show you now.

If PMCD had any inclination to be honest with the communities or this committee, they would have presented a schedule to you in late 2000 or today that at least made some attempt to reflect accurately the knowledge of the true schedule. The chart I am showing you is in your packet. There is a chart also in your packet that was the schedule presented at a public meeting in Anniston, Alabama, on March 17th, 2001, 5 months after this report internally was completed. That chart that was shown in Alabama in Anniston on March 17th presented to the citizens of Anniston, the emergency personnel, the local elected official, shows that Anniston will be completed in 2005. Yet their internal report shows that operations will not conclude in Alabama until 2014, a 9-year difference.

Senator SHELBY. Why the lapse, the difference? Why?

Mr. WILLIAMS. The difference is in the report. It is based on throughput projections based on actual operational experience at Johnston Island and in Utah and not just some projection that is basically mythical.

The story is the same at other sites, as reflected in the summary chart. What is being told to the American people and the Congress simply is not the truth. No one wants these weapons destroyed more than we do that live closest to them. But we should not be forced to risk the health of our communities by burning weapons

when safer technologies exist, and time and time and time again PMCD has claimed that incineration is the way to get the job done faster, the only way to meet the treaty deadlines.

PMCD has repeatedly used these Congressional deadlines, treaty deadlines, to manipulate communities into accepting what we consider to be a dangerous technology. Now that we have a report from the agency's own leaders showing that incineration cannot make the treaty deadline or even come close—additionally, we now know that citizens will have to be exposed to toxic emissions from these incinerators much longer than the Army is representing, and all this is unacceptable.

In the matter of cost, in the 1999 status report delivered to you, to Congress, PMCD stated the cost was $13.6 billion. In the 2000 report, as Senator McConnell pointed out, $14.1 billion. But those representations, like schedule, are also false. Provided to you in your packet is a one-page memorandum received from an anonymous source in the government which reconstructs the findings of another internal PMCD document. This report is tightly held within PMCD, as was their schedule document. The CWWG has not been able to obtain the original. Perhaps the committee would request a copy.

The summary page in your packet reflects what PMCD really knows about cost, and what does it tell us? That the actual projected cost of the program is not $14.1 billion, as you have been told, but actually closer to $24 billion. However, the 2000 status report cited the life cycle cost at $14.1 billion.

You will notice in your packet in that paper that there are two sections called "Operational extensions cost overruns" and "Projected operational extension cost overruns." The total of those two lines are $4.7 billion in known or likely cost overruns for operations alone, not construction, not CSEPP, not non-stockpile—strictly for construction—I'm sorry, simply for operations based on the schedule extension.

Looking at the information from both documents, I submit to you that we have been intentionally misled about not only schedule but cost in this program, and this is also unacceptable.

I would submit for the record this statement. It goes into areas of permit fraud, particularly in the State of Oregon, where we have yet another confidential memo that demonstrates the fact that PMCD when they submitted their permit application to the State of Oregon knew that what they were submitting to that State as representative of that facility and its operational capability, they knew it would not function.

They are required under Federal law to present an accurate representation of what they plan to build and operate. Because of the time lines in the submission of the application both in Oregon, Alabama, and Arkansas, this same fraud was perpetuated at all three sites. The Army knew and the confidential memo states clearly, and I quote the regulating supervisor from Oregon where he says the Army knew in the late eighties that the dunnage incinerator would definitely not be able to process the material.

They received the application in 1995. But the regulatory supervisor says: "The Army has presented information to the Department of Environmental Quality (DEQ) that clearly shows they

knew in 1994 that the dun would not meet the required performance standards."

If these people know that this is not going to meet the standards, they are required to modify their application. Otherwise they have committed fraud under RCRA, the Resource Conservation Recovery Act.

I am going to briefly walk through the next issue, which is of great concern, and that is live agent releases. The Army is on the record as saying they have had four live agent releases out of the stacks of their facilities. In my testimony and in the packet I have given you is evidence of at least 15 live agent releases out of the stacks of these facilities that we can document. We say that there are very many more, but we are only presenting to the committee those that we can prove. They say 4, we say 15. We do not really know how many, but four is clearly a gross underestimation.

In summary, I would just like to say what it all boils down to, Mr. Chairman and members of the committee, is a lack of accountability and oversight based on what I have presented to the committee both in oral and in written form in your packets today, that there is absolutely no question that these two components, accountability and oversight, are in short supply in this program.

I have provided to you in your packets excerpts from over 10 years of reports generated inside and outside of government, all reaching the same fundamental conclusion. That is, when it comes to PMCD no one is minding the store.

The 2000 report from the Secretary of Defense to the Congressional defense committees on the management of the chemical weapons demil program states: "CDP"—chemical disposal program—"requires a number of management improvements. These relate to leadership, organizational structure, public outreach, and current contracted support for the program."

They state: "No one individual or office appears to have day to day authority or responsibility for the program, whether internally or in the chemical demil program's external relations with the public and the Congress. The Secretary recommends restructuring the organization." But the report also says merging the management of the programs would require amending legislation.

Based on the evidence presented and much more that is in your packets, it should be clear that the chemical weapons disposal program must be reorganized to bring about honesty and accountability to the public, to the Federal decisionmakers. We in the communities feel this is of uppermost importance.

PREPARED STATEMENT

We thank you for holding these hearings on this most serious matter. I will be glad to take any questions after the other panelists present.

[The statement follows:]

PREPARED STATEMENT OF CRAIG WILLIAMS

Good morning Mr. Chairman and Members of the Subcommittee. I appreciate the opportunity to present testimony before you today. My name is Craig Williams. I am the Director of the Chemical Weapons Working Group (the CWWG). The CWWG is a coalition of over 160 organizations that support the destruction of chemical

weapons in a manner which does not destroy the health of our communities and the environment, and is implemented in an honest, open process.

The CWWG supports the Chemical Weapons Convention (CWC), the international campaign to rid the world of these weapons.

However, we put the safety of workers and the public as a priority over any arbitrary deadline, for we live in the communities where the destruction is to take place.

I come before you today with a message—that the Program Manager for Chemical Demilitarization (PMCD), the agency responsible for carrying out the chemical weapons program, has run amuck. Although I consider many individuals within the agency to be hard working and honorable people, the current structure and leadership in PMCD is more concerned with defending its own bad decisions rather than ensuring "maximum protection" of the public, as was directed by Congress.

Mr. Chairman, Members of the Committee, the Guinness Book of World Records cites VX chemical warfare agent as the "deadliest substance in the World." It is not material that should be put in the care of an agency that chronically misrepresents facts to the Congress and the American people. Yet, I will present to you evidence of systemic misrepresentation of technical capability, schedule compliance, cost, permit fraud, fiscal mismanagement and outright lies to citizens and to you, the Congress of these United States.

First, let me begin with PMCD claims on their capability to meet CWC treaty deadlines.

Schedule:

The schedule of disposal operations as offered to Congress on September 30, 2000, shows the operational period at all four incineration sites ending by January 2007. Three months before the Treaty deadline. Colorado and Kentucky have no closure dates in this Report as the technology for these sites has yet to be determined. But the 1999 Status Report shows a Kentucky completion date of April 2007 and Colorado at August 2007, using incineration.

In the packet of information provided is an internal report produced by PMCD which shows that these representations are knowingly false. The Report, "Operations Schedule Task Force 2000: Final Report" is accompanied by a memo to the Project Manager for Chemical Stockpile Disposal and copied to every high ranking person in PMCD. It also has a "concurrence " page signed off on by each Task Force member.

Since the CWWG, received this Report through unofficial channels, we have consulted with three experts with a cumulative total of more than fifty years of experience in chemical weapons related activities. Based on the Report, the CWWG developed a methodology and a set of calculations, which resulted in the actual operational schedule on the chart before you.

If PMCD had any inclination to be honest with the communities or this Committee they would have presented a schedule to you in late 2000 that at least made some attempt to reflect accurately its knowledge of the true schedule.

But their deception goes further. The chart I am holding up is in your packet. It is the schedule presented at a Public Meeting in Anniston, Alabama on March 17, 2001—five months after the Task Force Report was completed. This chart presented to the citizens of Anniston, the emergency personnel and the local elected officials, shows an intentionally false schedule for Alabama. It clearly shows operations conclude in 2005. Yet their internal Report shows operations will not conclude in Alabama until 2014, a nine year difference!

The story is the same at the other sites as reflected in the summary chart in your packet and displayed for you here.

What is being told to the American people and the Congress simply isn't the truth!

No one wants these weapons destroyed more than the citizens living closest to them. But we should not be forced to risk the health of our communities by burning the weapons, when safer disposal technologies exist. Time and time again, PMCD has claimed that incineration can get the job done faster; that it was the only way the United States can meet the 2007 CWC deadline.

PMCD has repeatedly used Congressional deadlines, and now the Treaty deadline as a means to manipulate communities into accepting this dangerous incineration technology as the only way to met schedule.

Now we have a report by the agency's own leaders, showing that incineration can't make the Treaty deadline—or even come close.

Additionally, we now know citizens will be exposed to the toxic emissions from these incinerators for much longer than they are telling us.

All this is unacceptable.

Cost:

In the 1999 Status Report to Congress PMCD stated the cost of the stockpile disposal program was $13.6 Billion; in the 2000 Status Report it was up to $14.1 Billion. I believe their latest publicly stated cost projection is $15.7 Billion. But, like the representations on schedule, this information is false.

Provided to you is a one page memorandum received from an anonymous source in government which reconstructs the findings within another internal PMCD document.

This report is as tightly held within PMCD, as was their schedule document. The CWWG has not been able to obtain the original. Perhaps the Committee would request a copy.

This summary page reflects what PMCD really knows about cost—and what does it tell us? That the actual projected cost of this program is not the $15.7 Billion you and I have been told, but is actually closer to $24 Billion. However the 2000 Status Report cited the Life Cycle Cost Estimate at $14.1 Billion at a time when their true estimate was $24 Billion.

Cost and Schedule Information Integration:

Note the line items "Operational Extension "Known" and "Likely" cost increases in the cost chart. It shows a total of $4.7 Billion in additional costs for operations.

Calculating the cost of schedule slippage and the figure is $4.21 Billion.

Looking at the information from both documents, I submit to you that we have all been intentionally misled about the schedule and cost of this program.

Permit Fraud:

In addition, PMCD has committed permit fraud under federal law. You now have a confidential memo sent from Oregon's chief regulator on the chemical demilitarization program to the Director of the Oregon Environmental Quality Commission.

The memo's author points to the Army's "commitment to treat secondary waste "on-site," and then says, "The Army made these commitments to secure issuance of the permit . . .."

Under the federal Resource Conservation and Recovery Act (RCRA) laws (42 USC § 6925 & 40 CFR § 270), applicants are required to accurately represent the capabilities of any facility they seek a permit for. Information that would substantively change the accuracy of the application is required to be submitted in a timely manner during the application process and before the permit is issued, if known about before issuance.

The Oregon memo reads, "We [Oregon DEQ] now know that the Army [PMCD] knew as early as the late 1980's that the Dunnage Furnace would definitely not be able to process carbon, and would only be able to process other wastes (primarily wood) with major design modifications to the DUN furnace and it's pollution abatement system."

It then reads, "The application we received in 1995 includes the following statement, 'On the basis of the incinerator design and the JACADS date, it is anticipated that the Dunnage Incinerator will meet the applicable incinerator performance standard.'"

The memo goes on to say, "The Army (PMCD) has presented information to DEQ that clearly shows they knew in 1994 that the DUN would not meet the required performance standards." That Members of the Committee is permit fraud under federal RCRA law and PMCD should be held accountable.

Furthermore, since the Alabama and Arkansas permit applications were also submitted on or after the Oregon application, PMCD repeated this illegality at those locations as well.

Agent Releases:

Over the years the CWWG has been tracking live chemical agent releases from the Army's incinerators in the Pacific and Utah. But how forthcoming has PMCD been about these releases? Consider the following:

When asked about the number of live chemical warfare agent releases from their incineration facilities, PMCD's answer is, "There have been a total of four releases, three at JACADS and one at TOCDF." But this is not accurate.

—In a memo to Congressman Scotty Baesler in 1995, the Army acknowledges three JACADS releases, as well as 9 chemical agent releases at CAMDS, the Utah prototype incinerator.

—A 1995 Report to EPA shows another release at JACADS.

—A 1999 incident report submitted to the State of Utah said the alarms ". . . did not confirm agent." But a subsequent internal report on the same incident concludes that agent did migrate outside.

This internal report also shows how the agent confirmation methods used by PMCD, "have allowed false assumptions to be made" for the thousands of alarms that have rung off—always presented to the public as false alarms (ie: not confirmed for agent). We believe this is by design.

Counting the May 8, 2000 Utah incident, rather than the four agent releases PMCD admits to, we have 15 that can be documented.

This is unacceptable.

Oversight and Accountability:

What it all boils down to then Mr. Chairman . . . Members of the Committee . . . is a total lack of accountability and oversight. Based on what I have presented to this Committee in both oral and written form today there should be absolutely no question that both accountability and oversight are in short supply in this program.

I have provided excerpts to you from over ten years of reports generated inside and outside of government all reaching the same fundamental conclusion—when it comes to chemical weapons disposal and PMCD—nobody is minding the store.

In the 2000 Report of the Secretary of Defense to the Congressional Defense Committees on the Management of the Chemical Demilitarization Program it states, "CDP requires a number of management improvements. These relate to leadership, organizational structure, public outreach and current contracted support for the program." and that, "No one individual or office appears to have day-to-day authority or responsibility for the program whether internally or in the CDP's external relations with the public and the Congress."

The Secretary's recommendation: "Restructuring of the organization." But the Report also said, "Merging the management of the programs would require amending legislation."

Based on the evidence presented, it should be clear that the chemical weapons disposal program must be reorganized to bring about honesty and accountability to the public and the federal decision-makers.

Thank You for holding these Hearings on this very serious matter.

[CLERK'S NOTE.—Due to the volume of the "Operations Schedule Task Force 2000 Final Report", the report will be placed in the subcommittee files.]

Senator SHELBY. Mr. Kinney.

Mr. KINNEY. I have been asked to defer to Mr. Henderson if that is okay for now.

Senator SHELBY. Mr. Henderson. Go ahead, Mr. Henderson.

STATEMENT OF JAMES ELI HENDERSON, ASSOCIATE COMMISSIONER, CALHOUN COUNTY, ALABAMA

Mr. HENDERSON. Mr. Chairman, Senator Shelby, members of the committee: My name is Eli Henderson and I am a Commissioner in Calhoun County, Alabama.

Senator SHELBY. Pull that mike up closer to you.

Mr. HENDERSON. I am a Commissioner in Calhoun County, Alabama. My district includes all the area around the Anniston Army Depot (AAD) where 2,500 tons of deadly chemical agents are stored in the middle of a population center. There are more than 76,000 people residing in the Calhoun County immediate response zone, a radius of 9.5 miles around the chemical weapons stockpile at AAD.

In sum, my constituents are at ground zero. Our commission is involved because we operate the local emergency management agency. The Army says it will destroy the 2,500 tons of deadly agents, but they refuse to assume any liability off post, refuse to make any final decisions regarding what emergency action our county should take, and are only willing to make a protective action recommendation based on a faulty guidebook they want us to implement.

When the Army came to Anniston years ago to seek approval for the incinerator, I was one of the Army's biggest supporters. I am a former Marine. I believe in a strong national defense. I know how

dangerous the agents stored at AAD are because for 10 years I worked at the depot wearing a gas mask and looking for leaking munitions, particularly M–55 GB rockets.

When the debate raised about whether to build the incinerator or seek alternative technologies, I stood shoulder to shoulder with the Pentagon. I believed the Army when they told our community that they would provide us with maximum protection. I believed them when they said the incinerator was failproof. I believed them when they told us that the destruction would be done on a no-effect basis, meaning exposure to agent would be so low that we would have no adverse health effects. I believed them when they told us they would provide us with the Federal funds necessary to collectively protect our schools, hospitals, senior citizens centers, and nursing homes so that our citizens would be shielded from these deadly agents. I believed them when they told us that we would have sufficient time to evacuate.

Events during the past few years have shown that I was wrong. The Army has misled the citizens of Calhoun County. The failproof technology they promised us does not exist. The incinerator at Johnston Atoll leaked five times. After a thousand design modifications, the Army constructed a second incinerator at Tooele, Utah. Despite promises the technology had been perfected, the Tooele incinerator leaked 42 milligrams of sarin on May the 7th of last year. The accident was due to a number of factors, but human error was the biggest problem, and human error can never be eliminated.

The State of Utah shut the incinerator down for the fourth time in 5 years, and a month before the leak there were 38 false alarms, a dozen of unknown origin. The operator illegally attempted to restart the furnace and waited 4 hours before notifying local emergency personnel. So much for a failproof technology.

Regarding the no-effect standard, our community was always told we would never be exposed to agents at a level that would affect our health. That promise was made repeatedly during the Army's campaign to gain the needed support. That promise has continued while the contractor secured the construction permit.

Then last year, after more than $750 million had been spent and the facility was more than 90 percent complete, we were given a copy of the Alabama CSEPP guidebook. This guidebook contains the protective action recommendations which the Army and FEMA want us to tell our citizens to take in the event of an accident. The guidebook caught us totally off guard because, instead of the no-effect standards we had promised our citizens, it contained a new, weaker standard of no deaths and, when you read the fine print in the footnotes, an even weaker standard of 1 percent lethality. So much for the promise of no effects.

The guidebook contained another disturbing change. Instead of the long-promised evacuation option our citizens had been practicing for the past decade, the guidebook analyzed thousands of potential scenarios and concluded that in more than 95 percent of the situations studied for people living in the Anniston-Oxford-Saks-Weaver population center there would not be sufficient time to evacuate.

The guidebook instead recommended we tell our citizens in the population centers to shelter in place. According to last year's letter

from the depot's commander, shelter in place means—and I am quoting Colonel Williams—

"Stay calm. Stay inside or go inside if you are outside. Close all doors to the outside and close and lock all windows. Turn off all air conditioning, heating exhaust and ventilation systems with fans. Do not place the system on recirculate. If there is a fireplace, extinguish the fire and close the damper. Close as many internal doors as possible in home or other buildings. Close all garage doors in attached garages as well as doors normally left open for ventilation. Go into a central room with the least number of windows, such as a bathroom or interior closet. Take an AM–FM radio. Keep your radio on and tuned to an EAS station. Stay calm and move as little as possible. Activity increases the rate of breathing, which leads to greater exposure to any vapors which might seep into the room. If you suspect that vapor has entered your structure, hold a wet cloth over your nose and mouth."

At the same time, the guidebook recommends our Emergency Management Agency (EMA) tell citizens living outside the population center that they evacuate as soon as possible. Think about that. The leaking agent is so toxic the people 10, 20, 37, 40 miles away need to evacuate, but people in downtown Anniston will be just fine if they go into their homes. What do you think the people being told to shelter in place are going to do if they hear their neighbors in the next zone being told to get away from the plume? The answer is they are going to run. Roads are all going to be clogged. Traffic accidents are going to occur. People will get sick and die.

The guidebook is a very curious document. Neither the Army nor FEMA has been willing to publicly endorse it or validate its recommendations or assumptions. Yet they expect us to follow it in every respect. Last week all five commissioners sent a letter to Governor Don Seigelman asking him to halt the implementation of the guidebook. In that letter we pointed out that the guidebook was based on a series of false assumptions.

The most troubling of these assumptions was the guidebook's use of the Army's totally outdated and inaccurate toxicity thresholds for sarin and VX. A 1997 National Research Council criticized the Army's proposal to drop the 50 percent lethality threshold for sarin for healthy male soldiers from 70 milligrams per minute per cubic meter, which reflected the Army's overall kill strategy, to 35 milligrams per minute per cubic meter. The National Research Council (NRC) stated the 50 percent lethality threshold should be dropped much further, noting 1 percent lethality for healthy male soldiers at 40 milligrams per minute per cubic meter. The Army has never adopted the 35 milligram standard, nor has the guidebook.

During a 1998 hearing before the Alabama Department of Environmental Management, Army witnesses admitted that if the NRC's proposed new toxicity thresholds for GB for healthy male soldiers were applied to the general population, the toxicity threshold would be much lower. Army witnesses also admitted that, based on the NRC's recommendations, if the 1 percent lethality threshold for GB were translated from healthy male soldiers to the general population the 1 percent lethality standard would be just 2 milligrams per minute per cubic meter.

Yet the guidebook assumes the 1 percent lethality threshold to be at 10 milligrams per minute. Thus when the Army tells us to follow the guidebook's recommendations they are asking our citi-

zens to be placed at risk of serious injury or even death. We cannot and we will not do that.

The guidebook assumes that 38 facilities in Calhoun County, these schools and hospitals that I mentioned earlier, have been overpressurized, a vital factor in deciding whether citizens in a zone should be recommended to shelter or evacuate. Instead, FEMA has only authorized nine facilities, for collective protection, and with the incinerator less than a year away from the scheduled start work has started on only five, on only five pressurized facilities.

The guidebook assumes no additional dosage to sheltered populations once they leave their home. That is true for sarin, but it is false for the other two agents stored at Anniston Army Depot, VX and HD. Plumes of VX or HD leave significant deposits of vapor and they create a very serious residual hazard for long periods of time.

Finally, the guidebook assumes dosage levels are applicable to only healthy male adults or only healthy adults. This assumption means weaker regiments of the local population—children, senior citizens like myself, individuals with debilitating illnesses, people confined to a wheelchair or a bed—will likely be subjected to far more serious and potentially fatal dosages.

Of course, the population in many sections of the county already face the added problem of having been exposed to large amounts of the Polychlorinated Biphenyls (PCB's) over an extended period of time, thereby raising the real issue of damaged immune systems.

Mr. Chairman, our commission has developed a 13-point checklist which we expect the Army and FEMA to implement if we are ever going to assist the Federal Government in providing maximum protection. The list is a sensible one and the items are not negotiable. The Army knows all the items on the list, as do the members of the Alabama delegation.

PREPARED STATEMENT

If we cannot get these safety items funded, we cannot go forward in this effort. We will have to turn the keys to the local EMA over to the State or to FEMA and let them decide what to tell our citizens. But we will reserve our right to take legal action to make certain the maximum protection standard is met.

[The statement follows:]

PREPARED STATEMENT OF JAMES ELI HENDERSON

Mr. Chairman, Senator Shelby, and Members of the Subcommittee, my name is Eli Henderson, and I am a Commissioner in Calhoun County, Alabama. My district encompasses the area around the Anniston Army Depot where 2,500 tons of deadly chemical agents are stored in the middle of a population center. There are more than 76,000 people residing in the Calhoun County Immediate Response Zone, a radius of 9.5 miles around the chemical weapons stockpile at AAD.

In sum, my constituents are at ground zero.

Our Commission is involved because we operate the local Emergency Management Agency. The Army says it will destroy the 2,500 tons of deadly agents, but they refuse to assume any liability off-post, refuse to make any final decisions regarding what emergency action our county should take, and are only willing to make a protective action recommendation based on a faulty Guidebook they want us to implement.

When the Army came to Anniston years ago to seek approval for the incinerator, I was one of the Army's biggest supporters. I am a former Marine. I believe in a

strong national defense. I know how dangerous the agents stored at AAD are because for ten years I worked at the Depot maintaining the stockpile.

When the debate raged about whether to build the incinerator or seek alternative technologies, I stood shoulder to shoulder with the Pentagon. I believed the Army when they told our community they would provide us with maximum protection. I believed them when they said the incinerator was failproof. I believed them when they told us the destruction would be done on a "no effects" basis, meaning exposure to agent would be so low that we would have no adverse health effects. I believed them when they told us they would provide us with the federal funds necessary to collectively protect our schools, hospitals, senior citizens centers and nursing homes so that our citizens would be shielded from these deadly agents. And I believed them when they told us that we would have sufficient time to evacuate.

Events during the past two years have shown that I was wrong. The Army misled the citizens of Calhoun County. The failproof technology they promised us does not exist. The incinerator at Johnson Atoll leaked five times. After a thousand design modifications, the Army constructed a second incinerator at Tooele Utah. Despite promises the technology has been perfected, the Tooele incinerator leaked 42 milligrams of sarin on May 7th of last year.

The accident was due to a number of factors, but human error was the biggest problem, and human error can never be eliminated. The State of Utah shut the incinerator down for the fourth time in five years. In the month before the leak there were 38 false alarms, a dozen of unknown origin. The operator illegally attempted to restart the furnace and waited four hours before notifying local emergency personnel.

So much for a failproof technology.

Regarding the "no effects" standard, our community was always told we would never be exposed to agents at a level that would affect our health. That promise was made repeatedly during the Army's campaign to gain the community's support. That promise continued while the contractor secured the construction permit. Then, last year, after more than $750 million had been spent, and the facility was more than 90 percent complete, we were given a copy of the Alabama CSEPP Guidebook. This Guidebook contains the protective actions recommendations which the Army and FEMA wants us to tell our citizens to take in the event of an accident.

The Guidebook caught us totally off guard because instead of the "no effects" standard we have promised our citizens, it contained a new, weaker standard of "no deaths". And, when you read the fine print in the footnotes, and even weaker standard of "1 percent lethality".

So much for promise of no effects.

And the Guidebook contained another disturbing change. Instead of the long promised evacuation option our citizens had been practicing for the past decade, the Guidebook analyzed thousands of potential scenarios and concluded that, in more than 95 percent of the situations studied for people living in the Anniston-Oxford-Saks-Weaver population center, there would not be sufficient time to evacuate. The Guidebook instead recommended we tell our citizens in the population centers to "shelter in place".

According to last year's letter from the Depot's Commander, shelter in place means—and I am quoting:

—Stay Calm
—Stay inside, or go inside if you are outside
—Close all doors to the outside, and close and lock all windows
—Turn off all air conditioning, heating exhaust and ventilation systems and fans. Do not place the system on recirculate
—If there is a fireplace, extinguish the fire and close the damper
—Close as many internal doors as possible in home or other buildings
—Close all garage doors in attached garages, as well as door normally left open for ventilation
—Go into a central room with the least number of windows, such as a bathroom or interior closet
—Take an AM/FM radio. Keep your radio on and tuned to EAS station
—Stay calm and move as little as possible. Activity increases the speed of breathing, which leads to greater exposure to any vapors which might seep into the room
—If you suspect that vapor has entered your structure, hold a wet cloth over your nose and mouth.

At the same time, the Guidebook recommends our EMA tell citizens living outside the population center that they evacuate as soon as possible. Think about that. The leaking agent is so toxic that people ten, twenty, thirty even forty miles away need to evacuate, but people in downtown Anniston will be just fine if they go into their

homes. What do you think the people being told to "shelter in place" are going to do so if they hear their neighbors in the next zone being told to get away from the plume? The answer is they are going to run. Roads are going to be clogged. Traffic accidents are going to occur. People will get sick and die.

The Guidebook is a very curious document. Neither the Army nor FEMA has been willing to publicly endorse it or validate its recommendations or assumptions. Yet they expect us to follow in every respect. Last week all five Commissioners sent a letter to Governor Don Siegelman asking him to halt the automation of the Guidebook. In that letter, we pointed out the Guidebook was based on a series of false assumptions. The most troubling of these assumptions was the Guidebook's use of the Army's totally outdated and inaccurate toxicity thresholds for Sarin and VX.

A 1997 National Research Council Report criticized the Army's proposal to drop the 50 percent lethality threshold for Sarin for healthy male soldiers from 70 milligrams per minute per cubic meter, which reflected the Army's "overkill" strategy, to 35 milligrams per minute per cubic meter. The NRC stated the 50 percent lethality threshold should be dropped much further, noting 100 percent lethality for health male soldiers at 40 milligrams per minute per cubic meter. The Army has never adopted the 35 milligram standard, nor has the Guidebook.

During a 1998 hearing before the Alabama Department of Environmental Management, Army witnesses admitted that, if the NRC's proposed new toxicity thresholds for GB for healthy male soldiers were applied to the general population, the toxicity threshold would be much lower. Army witnesses also admitted that based on the NRC's recommendations, if the one percent lethality threshold for GB were translated from healthy male soldiers to the general population, the one percent lethality standard would be just two milligrams per minute per cubic meter.

Yet, the Guidebook assumes the one percent lethality threshold to be 10 milligrams per minute. Thus when the Army tells us to follow the Guidebook's recommendations, they are asking our citizens to be placed at risk of serious injury or even death. We cannot—and we will not do that.

The Guidebook assumes that 38 facilities in Calhoun County—those schools and hospitals I mentioned—have been overpressurized, a vital factor in deciding whether citizens in a zone should be recommended to shelter or evacuate. Instead FEMA has only authorized nine facilities for collective protection and, with the incinerator less than a year away from the scheduled start, work has started on only five.

The Guidebook assumes no additional dosage to sheltered populations once they leave their home. That is true for Sarin, but it is false for the other two agents stored at AAD: VX and HD. Plumes of VX or HD leave significant deposits of vapor and they create a very serious residual hazard for long periods of time.

Finally, the Guidebook assumes dosage levels are applicable to only the healthy adults. This assumption means weaker regiments of the local population—children, senior citizens, individuals with debilitating illnesses, people confined to a wheelchair or bed—will likely be subjected to far more serious and potentially fatal dosages.

Of course, the population in many sections of the County already face the added problem of having been exposed to large amounts of PCBs over an extended period of time, thereby raising the real issue of damaged immune systems.

Mr. Chairman, I ask unanimous Consent that the Commission's April 18, 2001 letter to Governor Seigelman detailing our objections to the Guidebook's automation be including into the record at this point.

Mr. Chairman, our Commission has developed a thirteen point check list which we expect the Army and FEMA to implement if we are going to assist the federal government in providing maximum protection. The list is a sensible one and the items are not negotiable. The Army knows all the items on the list, as do the members of the Alabama delegation. If we cannot get these safety items funded we cannot go forward in this effort. We will have to turn the keys to the local EMA over to the State or to FEMA and let them decide what to tell our citizens. But we will reserve our right to take legal action to make certain the maximum protection standard is met.

Finally, Mr. Chairman, our Commission has requested impact funds to the County to compensate us for having endured 2,500 tons of deadly agents for the past forty years, for the continuing negative effects they have on our local economy and our business development, and for the risks we will assume over the next decade during the destruction process. Your colleague, Senator Sessions, is working hard at the Armed Services Committee on this issue. I realize the real power resides here in this Subcommittee which controls every dime the Pentagon spends.

Our senior Senator who sits on this subcommittee and who had the wisdom to ask for this hearing will, I believe, ultimately be able to resolve all of these thorny problems.

I thank you and would be happy to answer any questions you may have.

Senator STEVENS [presiding]. Can I interrupt there? Have you got a list? How much money are you asking for?

Mr. HENDERSON. I have got one more page, Mr. Chairman.

Senator SHELBY. He said how much money? How much money?

Mr. HENDERSON. That we are asking for?

Senator STEVENS. Yes, sir.

Mr. HENDERSON. Can I read this last page and I will get into that?

Senator STEVENS. Yes, sir.

Mr. HENDERSON. They compensate us for having endured 2,500 tons of deadly nerve agent for the last 40 years, for the continuing negative effects they have on our local economy and our business development, and for the risks we will assume over the next decade during the destruction process, your colleague Senator Sessions is working hard on the Armed Services Committee on this issue. I realize the real power resides right here in this committee, which controls every dime the Pentagon spends. Our senior Senator, who sits on this committee and who had the wisdom to ask for this hearing, will I believe ultimately be able to resolve all these thorny problems.

I thank you and would be happy to answer any questions you may have. How much money are we asking for?

Senator STEVENS. Yes, sir.

Mr. HENDERSON. That is a tough question. We estimated for the impact funds alone for our community to provide some infrastructure for the evacuation routes and some other items would be around $70 million. Please take into consideration, Mr. Chairman, that we have got, again, we have got a huge—not a huge population I guess related to Washington, D.C., but in our area, as Senator Shelby well knows, we have got 75,000 people roughly in a 10-mile radius.

We have a terrible time—we would have a terrible time evacuating our community as things now exist.

Senator STEVENS. How many communities are within that zone of harm, just one?

Mr. HENDERSON. This whole area right here is in—our community is in the pink zone practically. We have got six pink zones and the people actually in our community right there, it is densely populated. Probably the whole community or at least I think six zones are in the pink zones. So I would say 65,000 people are in that immediate area.

Senator STEVENS. Are you seeking that amount of money annually or what is the time frame for that money?

Mr. HENDERSON. That would be nice, if we could get that. We would have to talk to our EMA director and my fellow commissioners. We have talked about this issue for years. That would be something we would probably hopefully get with Senator Shelby about and maybe Senator Sessions and Congressman Reilly, that we could sit down and talk about hopefully.

Senator STEVENS. Senator, I would like to talk to you about that.

I do think you make a tremendous point about preparedness. We cannot depend totally upon FEMA to be able to finance that unless

we put some money somewhere to help you. But I would like to talk about that, Senator.

Do you have a similar problem, Senator McConnell?

Senator MCCONNELL. Yes.

Senator STEVENS. How many communities are within the zone of harm there in your State?

Senator MCCONNELL. Well, it is not too far from Lexington, which has by Kentucky standards a very large population. What is the population of Madison County, Craig?

Mr. WILLIAMS. In the IRZ, the immediate response zone, it is about 55,000 people.

Senator SHELBY. Similar.

Mr. HENDERSON. Very similar.

Mr. WILLIAMS. To what Mr. Henderson referred to as the pink zone.

Senator MCCONNELL. Yes. We have got an elementary school right there as well.

Senator SHELBY. Mr. Kinney, do you want to go, or Ms. Lindell?

Mr. KINNEY. Ladies first.

Senator SHELBY. Your written statement was made part of the record. If you all want to just move along and give a synopsis of your statement, it would move the committee along.

STATEMENT OF BRENDA LINDELL ON BEHALF OF FAMILIES CONCERNED ABOUT NERVE GAS INCINERATION, ANNISTON, ALABAMA

Ms. LINDELL. Mine is not that long. I talk slowly, though, because I am from the South.

I want to thank you, Senator Shelby. This hearing has been a godsend, and I pray that you help us. My name is Brenda Lindell. I have been a resident of Anniston, Alabama, for more than 19 years. I am a founding member of Families Concerned About Nerve Gas Incineration, otherwise known as "Families." I have studied and been involved with the issue of chemical weapons for more than 9 years. During this time I have learned a lot about issues that I never thought I would in raising three children in Anniston.

So the citizens of the surrounding area of the Anniston Army Depot where the chemical weapons are stored have no say into how the chemical weapons were to be destroyed. Until 1991 when the Army declassified the stockpile, many citizens, including myself, were unaware that chemical weapons were even stored at Anniston Army Depot.

By the time PMCD, the program manager for chemical demilitarization, had decided to use on-site incineration as the method to destroy the chemical weapons, instead of seeking input from the community, the Army made a decision, then presented it to us as a done deal.

Coming from the perspective of a concerned citizen of Alabama, hearings are held merely as a formality. Input from citizens does not make a difference. For example, in Utah there was one public hearing held for all the sites to be permitted to burn PCB's in the incinerator. The EPA told us a hearing would be held in Anniston after the permit was issued, not before.

Raising concerns after the fact does not seem to have any effect. So if outside input does not have any effect, what about internal

input from the people who work on the project but have concerns? There have been three high level managerial whistleblowers that have come out of the Tooele facility.

The first was Steve Jones, who was chief of public safety; Trina Allen, chief of hazardous waste operations; and Gary Harris, the chief permit coordinator. In addition to that, Gary Millar, the EG&G plant manager of the facility, wrote a lengthy 12-page letter voicing his concerns about the safety of the facility, citing it as an accident waiting to happen. All of these have stated that the facility is not safe and have voiced numerous safety concerns.

Unfortunately, the Tooele facility continues to operate. So it would appear that external and internal forces cannot really do anything to change how these thousands of tons of chemical weapons are disposed. This almost juggernaut approach is seen in the permitting process itself. Instead of a pass-fail test like we all had in schools, incinerators are allowed to attempt trial burns repeatedly until they are successful. Then they are permitted to burn for years on this one-time trial result.

No chemical weapons incinerator has ever successfully passed a PCB trial burn. The Utah incinerator has been plagued by technical problems, chronic malfunctions, and repeated shutdowns. This is typical of incineration performance nationally.

The Anniston area is a community that is already heavily contaminated with PCB's due to Monsanto, now known as Solutia, illegally dumping the chemical for decades. Many citizens are already burdened with PCB's. Lead and mercury are also a contamination problem there. Recently we learned that the agents to be burned in the incinerator are at least twice as toxic as originally believed.

Taken together, this poses severe problems for more than the 75,000 people who live in the immediate response zone. Even if everything goes as promised with the incinerator, we will be exposed to many toxins and chemical agents being emitted from the incinerator for around 4 years, according to Army statistics. According to the data supplied by PMCD in the environmental impact statement, there is a list of more than 100 toxins that will be emitted from the incinerator in good working order.

Information obtained by the Chemical Weapons Working Group indicates that the incineration process in Anniston will take longer than the Army has told us, probably three times as long. The implications of this prolonged exposure to toxins are a major health concern. The incinerator operates using large volumes of heat and air flowing through it. If there is ever an accident, there is nothing that can be done to stop the agent from reaching the community. The alarms will sound when the agent leaves the stack. There will not be enough time for people to evacuate and there will be chaos and panic. The community will have less than 8 minutes to respond.

If an accident occurs during rush hour, people will not have time to get to an enclosed structure. Maybe this is why PMCD recently changed their standard from no deaths instead of no exposure.

The best way to protect the community is to use a technology that has no smokestack. Incineration uses high temperature, high pressure. Neutralization uses low temperature, low pressure. Neutralization allows for the operator to be able to make a test release.

An incinerator does not. Neutralization allows for analysis of effluents each step of the way before these effluents are released into the environment. Neutralization is a controllable technology. Incineration is not. By being controllable, neutralization allows for the lowest potential of releasing toxins into the environment.

As someone that lives in the immediate response zone in Anniston, my family and I have the most at stake in the Federal Government's decision about how these chemical weapons are destroyed. I urge you to consider the health and safety needs of our community, but this should be done at more than my urging. The Federal Government has a statutory duty to provide maximum protection.

Senator Shelby, you mentioned early about costs. This has no budgetary constraints. Maximum protection was not mandated by budget. It has an open budget for the health and safety of the citizens. This subcommittee should make sure that that duty is met.

I believe only a safer method of destruction than incineration can accomplish this goal. Fortunately, we do have time if we act now. All reports today by SBCCOM, which is Soldier Biological Chemical Command, show the storage capabilities are stable through the year 2043. This allows time for implementation of a safer technology. It does not mean you have to start over from scratch. The incinerator can be retrofitted. The alternative technologies were designed with that in mind, so they can use the footprint of the incinerator. The safety of our community outweighs everything.

PREPARED STATEMENT

Just a P.S. from earlier comments about the Centers for Disease Control (CDC): It is funded by the Pentagon.

Thank you very much.

[The statement follows:]

PREPARED STATEMENT OF BRENDA LINDELL

Mr. Chairman. Senator Shelby, and Members of the Subcommittee: My name is Brenda Lindell. I have been a resident of Anniston, Alabama, for more than 19 years. I am a founding member of Families Concerned About Nerve Gas Incineration, or Families. I have studied and been involved with the issue of chemical weapons for more than 9 years. During this time, I have learned a lot about issues I never thought I would face while raising our three children in Anniston.

The citizens of the surrounding area of Anniston Army Depot (AAD), where the chemical weapons are stored, had no say into how the chemical weapons were to be destroyed. Until 1991 when the Army de-classified the stockpile, many citizens were unaware that chemical weapons were even stored at AAD. By that time PMCD (Program Manager for Chemical Demilitarization) had decided to use on-site incineration as the method to destroy the chemical weapons. Instead of seeking input from the community, the Army made a decision, then presented it to us as a done deal.

Coming from the perspective of a concerned citizen in Alabama, hearings are held merely as a formality. Input from citizens does not make a difference. For example, in Utah there was one public hearing held for all the sites to be permitted to bum PCBs in the incinerator. The EPA told us a hearing would be in Anniston after the permit was issued, not before. Raising concerns after the fact doesn't seem to have any effect.

So if outside input doesn't have any effect, what about internal input from people who work on the project but have concerns? There have been 3 high level, managerial whistleblowers that have come out of the Tooele facility. They are: Steve Jones, chief of safety operations, Trina Allen, chief of hazardous wastes operations, and Gary Harris, chief permit coordinator. In addition, Gary Millar, the EG&G plant manager, wrote a lengthy letter voicing his concerns about the safety of the facility, citing it as an accident waiting to happen. All have stated that the facility is not

safe, and have voiced numerous safety concerns. Unfortunately, the Tooele facility continues to operate.

So it would appear that external and internal forces can't really do anything to change how these thousands of tons of chemical weapons are disposed. This almost juggernaut approach is seen in the permitting process itself. Instead of a pass/fail test like we all had in school, incinerators are allowed to attempt trial bums repeatedly until they are successful. Then they are permitted to bum for years on this one-time trial result. No chemical weapons incinerator has ever successfully passed a PCB trial bum. The Utah incinerator has been plagued by technical problems, chronic malfunctions, and repeated shut downs. This is typical of incineration performance nationally.

The Anniston area is a community that is already heavily contaminated with PCBs due to Monsanto illegally dumping the chemical for decades. Many citizens are already burdened with PCBs. Lead and mercury also are a contamination problem there. Recently, we learned the agents to be burned are at least twice as toxic as originally believed.

Taken together this poses severe problems for the more than 75,000 people who live in the Immediate Response Zone.

Even if everything goes as promised with the incinerator, we will be exposed to many toxins and chemical agents being emitted from the incinerator for around 4 years. According to the data supplied by PMCD, there are more than 100 toxins that are listed in the Environmental Impact statement. However, information obtained by the Chemical Weapons Working Group indicates that the incineration process in Anniston will take longer than the Army has told us—probably 3 times as long. The implications of this prolonged exposure to these toxins are a major health concern.

The incinerator operates using large volumes of heat and air flowing through it. If there is ever an accident, there is nothing that can be done to stop the agent from reaching the community. The alarms will sound when agent leaves the stack. There will not enough time for people to evacuate and there will be chaos and panic. The community will have less than 8 minutes to respond. If an accident occurs during rush hour, people will not have time to get to an enclosed structure. Maybe this is why PMCD recently changed their standard to "no deaths" instead of "no exposure".

The best way to protect the community is to use a technology that has no smokestack. Incineration uses high temperature/high pressure. Neutralization uses low temperature/low pressure. Neutralization allows for the operator to be able to make a test-release. An incinerator does not. Neutralization allows for analysis of effluents each step of the way, before these effluents are released into the environment. Neutralization is a controllable technology. Incineration is not. By being controllable, neutralization allows for the lowest potential of releasing toxins into the environment.

As someone living in the IRZ in Anniston, my family and I have the most at stake in the federal government's decision about how these chemical weapons are destroyed. I urge you to consider the health and safety needs of our community. But this should be done at more than my urging. The federal government has a statutory duty to provide "maximum protection". This subcommittee should make sure that duty is met. I believe only by a safer method of destruction than incineration can this be accomplished.

Fortunately we have time if we act now. All reports to date by SBCCOM (Soldier, Biological, Chemical Command) show safe storage capabilities through the year 2043. This allows time for implementation of a safer technology. It does not mean you have to start over from scratch. The incinerator can be retrofitted. The safety of the community outweighs everything.

Thank you.

Senator STEVENS. Mr. Kinney.

STATEMENT OF RUFUS KINNEY ON BEHALF OF FAMILIES CONCERNED ABOUT NERVE GAS INCINERATION, ANNISTON, ALABAMA

Mr. KINNEY. Mr. Chairman, Senator Shelby, members of the committee: My name is Rufus Kinney and I am an English instructor at Jacksonville State University in Jacksonville, Alabama, which is in Calhoun County about 12 miles downwind of the incinerator. I greatly appreciate the opportunity to address you this morning and I thank you for all of your efforts in this vital issue. I especially want to thank you, Senator Shelby, for responding to

the concerns of your constituents on this issue and for your positive leadership on this issue. Thank you so very much.

You know I have a lengthy statement and I am a verbose person, so I am going to cut the whole thing in two real quick. I know that is what you want me to do.

One brief note about expenses. The incinerator sits at the Anniston Army Depot today, its construction virtually complete. U.S. taxpayers have spent about a billion dollars for this facility that was originally supposed to cost $350 million. It contains multi-million dollar systems that have already been abandoned, already obsolete, never going to be used—a monumental waste of taxpayers' money—reduction area, dunnage incinerator, never going to be used.

The gelled rockets, they are going to wing it on the gelled rockets. Let me put it this way. There is no equipment designed to treat gelled rockets in this incinerator. Yet 30 percent of the rockets stored at Anniston are gelled rockets. So good luck on the efficiency for that.

This incinerator is already demonstrably, already demonstrably inefficient, out of date, a huge waste of money, and it has yet to become operational. That is one thing I wanted to say.

A second thing is about safety concerns. My concerns about safety have already been articulated very well by Mr. Henderson and Mrs. Brenda Lindell. I just want to say this as a father and a husband with a family. I am deeply concerned about my family and especially my wife and my children, my 12 year old and my 10 year old, with this business we can expect exposure but no fatalities.

What if my children get exposed but do not die? What kind of suffering are they going to go through, for how long and at what cost? That is just not acceptable.

As far as response in an emergency, that has already been articulated, but I want to show you the Army's plan. Here is my shelter in place kit, and the Army has suggested distributing these to the 75,000 people, however many, 30,000 homes in Calhoun County that are downwind of this incinerator. Mr. Henderson has already read the instructions, but I will show you what is inside. $130 million went to pay for this.

We have got duct tape and plastic and scissors. Now, the duct tape and plastic appear to be of the finest quality. The scissors look a little cheap, but I guess you have got to cut corners wherever you can.

This is maximum protection for 75,000 people, and 35,000 of them live within a 2-mile radius of this incinerator.

Senator SHELBY. What would the duct tape be, to tape up the doors and windows?

Mr. KINNEY. Well, you can use the duct tape to hold the plastic sheeting over the doors and windows, and then you put a wet towel under the doors and have a wet rag.

Senator SHELBY. Is this all going to be in 8 minutes or 5 minutes?

Mr. KINNEY. In 8 minutes. So I do not know if you carry it with you. I do not know if we carry it with us when we are outside. We are not told what to do if we are outside.

Senator SHELBY. Mr. Chairman.

Senator STEVENS. Could I ask one question? Are there any kind of gas masks that are effective against these gases?

Mr. KINNEY. Mr. Williams can answer that. I know that they decided a long time ago not to give us gas masks. They were talking about giving gas masks to everybody in Calvert County and they decided they would not do that.

Mr. HENDERSON. Mr. Chairman, I would like to answer that question. I wore a gas mask for 10 years. You have got to be personally fitted for a gas mask. You cannot just get one and put it on. Everyone would have to be personally fitted. Almost half the population could not wear one because of the breathing apparatus.

Senator STEVENS. Well, I asked that. You know, during the Gulf War some of us were in Israel when the Scuds came in and they put gas masks on us and put us in a room and they sealed the inside like you're suggesting, with duct tape and plastic. We stayed there for a few hours, until they told us that there was no nerve gas in what was exploded outside.

But the implication was that those gas masks would do some help. Have they ever explored that as far as you all are concerned?

Mr. KINNEY. They talked about it several years ago and rejected the idea, and I do not think it would be real good for public relations (PR) for the community: You move to Anniston, Alabama, and get your gas mask. Who is going to move to Anniston, Alabama, and get their gas mask and live their life in that way? I think you see what I mean. It is just not—it cannot be done.

Senator STEVENS. How many are going to stay there after this hearing?

Mr. KINNEY. Not many. They are already leaving. They are already leaving, and that is part of my—I will go to the second part of my address. The thing that I have to talk about that has not been discussed very much is—and this is my second major area of concern besides safety. It has to do with the possible negative health effects on the people and their children of constant low-level emissions of poison from the smokestack during routine operations of the incinerator.

The stack emissions sheet, which I am holding up and which you have in your record, was done at Johnston Atoll Chemical Agent Disposal System (JCADS) for the final testing for Anniston, so these are the emissions that would be coming out of the stack during routine operations of the incinerator. These emissions include PCB's, dioxins, furines, heavy metals including lead and mercury and arsenic, trace amounts of the nerve agents GB, HD, HT, and VX, and hundreds if not thousands of other poisons.

This will impact our health directly and a large number of agribusinesses, mostly Tyson Chicken farms and beef cattle farms and a major food processing plant in Anniston. Anniston is a city that has already been visited by a great deal of poisoning over the years as a result of the operations of a Monsanto, now Solutia, chemical plant in the same part of town as the incinerator, a plant that produced PCB's for several decades. Anniston is the most PCB-poisoned community in America.

I am holding up the June 19, 2000, issue of U.S. News and World Report, and you also have that in your packet, whose cover story says: "Kids at Risk: New Evidence Points to a Link Between Envi-

ronmental Poisons and Learning Disabilities." This cover story focuses on Anniston and explores the chemical poisoning of our children. Scientific studies now link environmental poisons with learning disabilities in America's children stemming from PCB poisoning, lead poisoning, pesticides, and mercury poisoning.

Regarding Anniston in particular, the article reports that the Monsanto-Solutia plant for decades "saturated west Anniston with polychlorinated biphenols." PCB's have long been linked to cancer. More recently, however, researchers have discovered evidence tieing the compounds to a lack of coordination, diminished Intelligence Quotient (IQ), and poor memory among children.

Anniston has the highest level of PCB contamination in children ever tested anywhere. Why in the name of sanity would the community with the Nation's highest level of PCB poisoning have its children subjected to a constant flow of PCB's from an additional source, 24–7, 365 days a year, for how many years?

Anniston has become what is known as a human sacrifice zone. A human sacrifice zone is a community that is deeply poisoned, has long been poisoned, cannot seem to get itself cleaned up, and can only seem to attract poisoning industries. A human sacrifice zone is shunned by professional people and families with children.

This is what caused Anniston to land at the bottom of the heap of American cities a couple of years ago in a survey done by Money magazine. We are posing population. There is widespread poor health. I could talk about it for an hour. Home and property values are plummeting. Anniston was the only major city in Alabama to lose population during the decade of the 1990's. See, we are already losing it. Anniston is becoming an even more unhealthy place to live. Do not do this to the children of Anniston.

PREPARED STATEMENT

I am now ready to conclude. I urge the U.S. Senate to pull back from this incineration program and let advanced alternative technologies have every opportunity to show what they can do. Give ACWA full funding. We need technology that can do the job safely, with minimal risks to the community, and that will be a closed loop system that by law cannot release poisons into the community.

Senators, thank you for doing the right thing from the citizens of Alabama, especially for the children.

[The statement follows:]

PREPARED STATEMENT OF RUFUS KINNEY

Mr. Chairman, Senator Shelby, and Members of the Committee: My name is Rufus Kinney and I am an English instructor at Jacksonville State University in Jacksonville, Alabama.

Mr. Chairman, I'd like to begin with a brief mention of the incinerator itself as it sits at the Anniston Army Depot, its construction virtually complete. The U.S. taxpayers have spent about $1 billion for a facility that was originally supposed to cost $350 million. That incinerator is not what was originally permitted by the Alabama Department of Environmental Management in June 1997. Systems at the plant, costing millions, have already been abandoned. This is a monumental waste of taxpayers' money. There is no data to show that this so-called state-of-the-art incinerator can safely destroy jelled rockets, yet jelled rockets compose 30 percent of the rockets stored in Anniston. The Army plans to stick the jelled rockets into the deactivation furnace, which was designed to be utilized for other purposes, and good luck! When jelled rockets are burned, the feed rate will go down from 40 per hour to 1 per hour, and that's about as inefficient as you can get. This kind of incinerator

is demonstrably inefficient, out-of-date, a huge waste of money, and it has yet to become operational.

The two major areas of concern I have are first, safety, and second, the possible negative health effects on the people of Anniston and Calhoun County, and their children, of constant low-level emissions of poisons from the smokestack during routine operations of the incinerator.

Regarding safety, or emergency response, a November 1985 Congressional Directive (Public Law 99–145) relating to the chem weapons demilitarization program requires "maximum protection for the environment, the general public, and the personnel who are involved in the destruction of the lethal chemical agents and munitions." This mandate has been reaffirmed several times and has the force of law. But, on June 20, 2000 in Montgomery the Alabama Department of Environmental Management (ADEM) denied the incinerator permit appeal of Families Concerned about Nerve Gas Incineration and Serving Alabama's Future Environment.

One of the most important aspects of the appeal was its insistence on a strong, workable contingency plan in case of an accident at the incinerator, a plan that would insure the safety of our children.

In total contradiction of Public Law 99–145, cited above, ADEM's unconscionable action freed the Army of any legal requirements to respond in an emergency beyond simply advising residents to stay at home, close windows, and turn off central air. The Calhoun County Commissioners' meeting with Army representatives on June 14, 2000, which I attended, clearly affirmed that indeed the Army intends to do nothing more than the absolute minimum. Thirty-five thousand people live within a two-mile radius of the incinerator. Seventy-five thousand reside in the Immediate Response Zone, a radius of 9.2 miles. After spending $120 million of taxpayer money in Alabama on this program, here is your protection: duct tape and plastic. Lt. Col. Paula Lantzer said, "They seem a bit simplistic, but we've done studies and these are very effective shelters."

After ten years of telling us to evacuate in an emergency, at the last minute, and with construction on the incinerator 80 percent complete, ten years of emergency planning are thrown out the window just as the Army learned that ADEM will absolve it of any further responsibilities. Thanks, ADEM. Now we can sit in our homes and hold our breath in an emergency! The Alabama Department of Management is a disgrace.

Special assistant to the Secretary of the Army Denzel Fisher shocked everyone present at the Commissioners' meeting with the revelation that the Army expects people will be exposed to agent, but likely won't die from it, at least at the time of the initial exposure. "Our objective is to have zero fatalities. That doesn't mean we won't have exposure," stated Fisher. In view of the nerve agent release at Tooele 1 month earlier, which we were guaranteed would never happen, could never happen, I suppose Fisher felt it would be best to be candid.

Personally, I wonder what it would be like for my children to be exposed, yet survive. What kind of pain and illnesses might they endure. and for how long and at what cost emotionally and financially? And who would pay for their medical expenses?

There's more. For ten years the Army promised us that if we'd just let them build the incinerator they'd never attempt to bring in one ounce of additional stuff to burn in it. But in fact, just 1 month after they received ADEM's permit to build in June 1997, PMCD spokesperson Tim Garrett wrote a letter on U.S. Army stationery to ADEM secretly seeking permission to bring in off-site conventional and non-stockpile military munitions to burn in the incinerator. And he got a lovey-dovey response from Gerald Hardy of ADEM, a pure attempt to turn Anniston into a toxic dumping ground. This same Tim Garrett continues to smile in our faces while he tells us to trust the Army!

ADEM's damnable ruling also lets Washington Group International, or Westinghouse Anniston as it is known locally, off the hook. The incinerator permit appeal requested reasonable compensation from the contractor to victims of incinerator accidents, but ADEM disallowed it, without discussion. The total liability of the contractor has been set at one million dollars, the exact same amount as the liability insurance held by my home appliance repairman for his one-man company! Yet Washington International Group just announced it was not going to file its annual 10–K form. Their stock has taken a nosedive and they are on a credit watch.

This has left the Calhoun County EMA in a quandary. What kind of workable, coherent plan can they use now? And how can they carry out any kind of plan in view of the constant denials of their requests for funding, staffing, and materials?

Toxicity levels are underestimated and out-of-date. Thus, risk assessments can't validly be made by our local EMA.

The Calhoun County EMA originally requested that 133 buildings be over pressurized to use in an emergency. That number was reduced by the Army and FEMA to 37 and then to 9! And it includes only one school.

This is outrageous. This is not maximum protection. It isn't protection at all—and through no fault of our county EMA or our county commissioners. It just won't work. It seems to me that when the U.S. Army chose to store these munitions on the edge of a large city instead of some place where no one lives, it was taking upon itself an obligation to be absolutely certain that no civilian resident ever be harmed by living in proximity to those munitions. Obviously the Army has utterly failed to carry out this responsibility.

My second major area of concern has to do with the possible negative health effects on the people, and their children, of constant low level emissions of poisons from the smokestack during routine operations of the incinerator. The stack emissions include PCB's; dioxins; furans; heavy metals including lead, mercury, arsenic; trace amounts of the nerve agents GB, HD/HT, and VX; and hundreds if not thousands of other poisons. This will impact our health directly and a large number of agribusinesses, mostly Tyson chicken farms and beef cattle farms, and a major food processing plant.

Anniston is a city that has already been visited by a great deal of poisoning over the years. As a result of the operations of a Monsanto (now Solutia) chemical plant in the same part of town as the incinerator, a plant that produced PCB's for several decades, Anniston is the most PCB-poisoned community in America. I am holding up the June 19, 2000 issue of U.S. News and World Report whose cover story says. "Kids at Risk: New Evidence Points to a Link between Environmental Poisons and Learning Disabilities." This cover story focuses on Anniston, and explores the chemical poisoning of our children. Scientific studies now link environmental poisons with learning disabilities in America's children stemming from PCB poisoning, lead poisoning, pesticides and mercury poisoning.

Regarding Anniston in particular, the article reports that the Monsanto (Solutia) plant for decades "saturated west Anniston with polychlorinated biphenyls. PCBs have long been linked to cancer. More recently, however, researchers have discovered evidence tying the compounds to lack of coordination, diminished IQ, and poor memory among children." Anniston has the highest level of PCB contamination in children ever tested! Why in the name of sanity would the community with the nation's highest level of PCB poisoning have its children subjected to a constant flow of PCBs from an additional source?

Anniston has become what is known as a human sacrifice zone. A human sacrifice zone is a community that is deeply poisoned, has long been poisoned, can't seem to get itself cleaned up, and can only seem to attract poisoning industries. A human sacrifice zone is shunned by professional people and families with children. This is what caused Anniston to land at the bottom of the heap of American cities.

We're losing population. There is widespread poor health. Home and property values are plummeting. Anniston was the only major city in Alabama to lose population during the decade of the 1990s. Anniston is becoming an unhealthy place to live.

Don't do this to the children of Anniston.

I urge the U.S. Senate to pull back from this incineration program, and let advanced alternative technologies have every opportunity to show what they can do. Give ACWA full funding. We need technology that can do the job safely, with minimal risk to the community, and that will be a closed-loop system that by law can not release poisons into the community.

Senators, thank you for doing the right thing for the citizens of Alabama, especially for the children.

Senator SHELBY. Mr. Salter, has there been a change of policy from zero exposure to zero fatalities?

Mr. SALTER. Sir, our policy statement number one, which is more than 10 years old, indicates that there be no deaths as the policy.

Senator SHELBY. What about exposure? You know, we have been talking about exposure.

Mr. SALTER. Well, we are certainly concerned about the exposure of the residents.

Senator SHELBY. How concerned?

Mr. SALTER. Concerned enough to work very closely with the residents in and around the Anniston area to do whatever is possible to protect them in the event that there is any kind of release.

Senator SHELBY. What should be the central issue that you are facing here? Safety, is it not?

Mr. SALTER. Yes.

Senator SHELBY. Safety, safety, safety.

Mr. SALTER. And public education, sir.

Senator STEVENS. And what?

Senator SHELBY. And public education?

Mr. SALTER. Yes, sir.

Senator SHELBY. Well, is that to alleviate their fears? Why do we not just deal with safety and then if that is part of it, fine.

Mr. SALTER. We certainly want to make sure that the public is protected. But a major part of that protection is the public understanding the full picture and what to do in the event there is a release.

Senator SHELBY. Mr. Kinney, do you have a comment?

Mr. KINNEY. Would you repeat that?

Mr. SALTER. I said, the public safety certainly is one of our utmost concerns in the CSEPP program. However, a major part of readiness of the community in the event there is a release is the public's understanding of what to do and the importance of taking that protective action.

Senator STEVENS. Mr. Salter, you heard the statistic Ms. Lindell gave about the leaks from the other places in Utah and Johnston Island?

Mr. SALTER. There have been a number of stories about leaks at different locations, leakers inside of the bunkers, yes, and we are very concerned about the risks of storage as much as the risk of incineration. Risk of storage is greater.

Senator STEVENS. Who has the authority to order the place shut down until it is perfected?

Mr. SALTER. That would have to be the Department of the Army or Department of Defense, sir.

Senator SHELBY. The Secretary of Defense?

Mr. SALTER. The Secretary of Defense, thank you.

Senator STEVENS. Well, I do not know about the rest of you. I am scared to hell by what you guys have just told me. I do not understand this policy, and I thought we had straightened this out years ago as a matter of fact.

How long since FEMA examined this place for the contingency that might bring you into operation there? You would have a contingency job there as an emergency management agency if something went wrong down there, would you not?

Mr. SALTER. Yes, sir, we would.

Senator STEVENS. How long since you examined this place?

Mr. SALTER. We have examined this place continuously over the last 10 years and work very closely with the State and the counties in putting the necessary protection in place.

Senator STEVENS. Do you think that box that was just demonstrated to us was enough to deal with this as far as the families are concerned?

Mr. SALTER. I think, depending on the location of the residents, yes, sir, I do.

Senator SHELBY. What about children on the playground?

Senator STEVENS. Eight minutes? You can put that thing up, that plastic up inside a house in 8 minutes?

Mr. SALTER. Sir, again it depends on the location of the residents, and 8 minutes is not necessarily the true picture. In the case of those residences that are closer to the depot, in a letter that we have provided to the county commissioners on the 1st of February we indicated that we should include in their shelter in place kits recirculation filter fans and public education telling them to create a safe room in their residence because they simply would not have time to do anything else.

In addition to that, sheltering has been proven in a number of instances in the past 10 to 20 years, that sheltering is a protective action that works.

Senator STEVENS. Any policy other than no emissions is unacceptable. Any policy that puts people at risk of using these instructions you have got is unacceptable. I am going to tell you, I think we ought to all have a meeting with the Secretary of Defense to tell him this is unacceptable.

I remember the hearings on Johnston Island and one of the effects there was—that was on an island and there was very little at risk. This is an enormous risk that I did not realize your people were being exposed to. I am going to tell you, it is unacceptable to us.

I can pledge to you both, Kentucky and Alabama, we will get you some money so your people can start getting really ready for this. But meanwhile the best thing we can do is to tell them to shut the place down until we are sure of what we are doing. Time is not the factor here. Time is not a factor.

Senator SHELBY. Mr. Chairman, I appreciate that.

Senator STEVENS. I think this continued exposure to your people is unacceptable.

Senator SHELBY [presiding]. I appreciate your comments, but my concern has always been the safety of the people. That should be paramount, period.

Senator McConnell.

Senator MCCONNELL. So, gentlemen, thank you very much. Thank you for asking for this hearing.

Senator SHELBY. Thank you.

Senator MCCONNELL. Well, the symbol of the Army's concern about public input is the fact that they all got up and left before your panel sat down to testify.

I am sure you all heard Mr. Bacon say in response to a question from Senator Shelby that the demilitarization process was 100 percent transparent. All of you who agree with that, raise your hand.

Mr. Williams, in your testimony you referred to the task force report in 2000, which I have here in my hand, which you have provided to the subcommittee. Are you suggesting to us that the Army has evidence that none of these sites can meet the Chemical Weapons Convention deadlines?

Mr. WILLIAMS. Yes, Senator, that is exactly what this report states. The treaty, as you know, requires us to complete operations by April 2007.

Senator MCCONNELL. Let me interrupt just for the benefit of the people in the audience. This is a report, internal report prepared by the Army, right?

Mr. WILLIAMS. Yes, Senator.

Senator MCCONNELL. I see about one, two, three, four, five, six, seven, eight, nine, ten signatures on this of people inside.

Mr. WILLIAMS. Yes, sir.

Senator MCCONNELL. This report says what about meeting the Chemical Weapons Convention deadlines?

Mr. WILLIAMS. It says for the 2007 deadline that none of these sites will meet it, other than JCADS of course.

Senator MCCONNELL. You were here earlier this morning and you heard the witnesses say that, as I recall, all but two of the sites would meet the Chemical Weapons Convention.

Mr. WILLIAMS. That is what I heard, Senator. That is what I have been hearing for a number of years.

Senator MCCONNELL. So your thought is that they are saying one thing inside and another thing when they come up here and talk to us?

Mr. WILLIAMS. Absolutely, Senator.

Senator MCCONNELL. How much will the delays outlined in this report that I am holding cost over the life of the program?

Mr. WILLIAMS. Well, as I referred to in my statement, we have a reconstructed summary document, which is also an internal document, on cost. It is in your packet. I do not have a graph of it, but I do have a graph of its implications on the right. Sorry, Senator Shelby might not be able to see it.

According to their own life cycle cost estimates, which they reassured you this morning are holding pretty steady at $14.1 billion, they anticipate known and likely cost growths of over $10 billion.

Senator SHELBY. Excuse me a minute.

Mr. WILLIAMS. Yes, sir.

Senator SHELBY. You used the phrase "they reassured" us. I think they tried to reassure us, but I do not have any reassurance.

Mr. WILLIAMS. I understand. They attempted to reassure you, sir.

Senator MCCONNELL. You stated in your testimony, Mr. Williams, that the Army told the citizens of Anniston, a number of whom we have with us here—I might say parenthetically, I started my life in Alabama in Athens, Alabama, north of you. I spent the first 8 years of my life there. So it is always great to have witnesses who speak without an accent.

You stated in your testimony that the Army told the citizens of Anniston in March of this year, 5 months after this, the internal memo, was complete, that their facility would be closed by 2006. Was this an honest mistake, an oversight, or how would you characterize it?

Mr. WILLIAMS. Well, Senator, I would characterize it as a result of a public relations campaign that is funded to $30 million to try and convince folks that this program is workable. It is not just in Anniston. I have that chart that was presented that date. It is in

your packet here. I asked one of my colleagues in Oregon, another chemical weapons construction site, to go down to the public outreach office and pick up the latest information there, and this was done on Thursday last week. They have a chart as well from the outreach office in Oregon that clearly states operations will take from 2001 to 2005.

So it is no mistake that they are circulating this information around these communities while their internal documents show that Alabama will not get completed until 2014 and Oregon will not get completed until 2012. I do not think there is any misinterpretation on their part of what they are talking about.

One of the problems with transparency or one of the realities of transparency is you do not have to get secret documents smuggled out to concerned citizens in order to find out what is really going on.

Senator MCCONNELL. That is what in fact happened here, right, is somebody inside, who will obviously remain nameless, has provided you this report which contradicts most of what was said earlier this morning here, right?

Mr. WILLIAMS. I believe it contradicts everything that was said here, Senator, yes.

Senator MCCONNELL. What I do not understand—and Mr. Williams, you and I have been involved in this issue as long as I have been in the Senate—is what the problem is in not just being truthful and forthcoming about this. I have never understood the internal thinking that led to this effort to obfuscate the facts here. It seems to me it would be in everybody's best interests, both the citizens and the Army, to have a completely transparent process from beginning to end.

I am mystified by this. Have you ever figured out why this continues?

Mr. WILLIAMS. Well, my wife has the degree in that area, sir, so I would not want to speculate in any professional manner. But I can tell you this, that in the 15 years that I have been monitoring this program there has been an increased mentality inside PMCD to defend the image of this program. I do not know if that is based on careers inside the program, if it is based on just the military mentality, which generally—and being a Vietnam veteran myself, I certainly understand that in a battlefield situation when your superior gives you an order you salute and you respond promptly. You do not sit down and negotiate.

But this is not a battlefield situation. But I think the military mentality.

Senator MCCONNELL. Also, do you think a problem has been the lack of interest at the top in DOD, a feeling of sort of out of sight, out of mind, do not bother me with this?

Mr. WILLIAMS. Absolutely, Senator. The chain of command in this program is that PMCD reports to one higher authority once a month. They say: How is it going? They say: It is going fine. They say: We will see you next month. There is no oversight, day to day management accountability of this program. PMCD is outside the chain of command in a way that the Army Inspector General (IG) report itself in 1998 said was contrary to Army philosophy. They are outside of any normal chain of command and that is a big prob-

lem with this program. They have nobody. This program needs some adult supervision, sir, if I might say.

Senator MCCONNELL. Finally, given the difficulty we had getting to the point of actually getting alternate technologies looked at within the Department, we will not recount how difficult all that was. You were pushing for it for years. I was pushing for it for years. We finally got it.

Do you think that people within the Department doing that review of alternative technologies for disposal now have a chance to prevail in a final decision, or do you still think within the building it is so tilted in favor of on-site incineration that even if these alternate technologies make sense they are not likely to be pursued?

Mr. WILLIAMS. First of all, let me thank you for your efforts. I know that it has been a very uphill struggle to try to force these folks to look at safer ways to dispose of the materials. I appreciate that. Many, many of us appreciate that.

My response would be that as long as PMCD is using these kinds of schedules and representing costs, schedule, technical capability, and all of these factors inside the building to the defense acquisition review and those kinds of people who are going to make the final decisions, instead of these kinds of information, which is what they really know about it, I am very concerned that that process will be subverted simply by a continued pattern of misinformation that is going to lead to an eventual appropriations level that is at this point almost off the chart based on what they really know, and that these kinds of factors are going to play into a decision that will perpetuate this construction program because it has been misrepresented.

On the other part of your question, sir, I feel the alternative technologies program, not only from a public involvement perspective, but clearly these technologies that have a hold, test and release capability, which means as the process goes along there is no process to stop, you can analyze what you have got, have you achieved the destruction levels you want; if you have not, you continue the process until you reach them, and you control the material until you get to the point where the material is easily handleable or can be then released to a landfill or whatever, but you have control.

With these baseline construction technologies, as we have seen repeatedly—and they have misrepresented to everyone about the number of agent releases that have come out of the stacks—once you put that material in, it is out of your control. That is a major consideration. These alternatives do not have that problem, sir.

Senator MCCONNELL. Well, we are going to get to the critical decision point here shortly, right?

Mr. WILLIAMS. Yes, sir.

Senator MCCONNELL. What did we hear this morning about that decision?

Mr. WILLIAMS. That should be May of next year. That appears to be on track. The representation by Mr. Bacon that they can get any where close to 2007 in Blue Grass is a pure fiction.

Senator MCCONNELL. Let me just say in closing, they better have a good justification for their final decision or we are going to be—and Senator Shelby I am sure will agree with this—we are going

to be interested in hauling them back up here again to give some rationale for their decision if it does not pass the public smell test.

Mr. WILLIAMS. Well, sir, I would repeat and I will end. It depends on which side of their mouth they are talking out of, Senator. If they talk out of the mouth with the real facts, I think we will get to a good decision. If they talk out of the side of their mouth that is driven by public relations, public affairs, and propaganda and manipulation, then we will get to a decision that will land us right back here.

Senator MCCONNELL. Let me just conclude my part of this by thanking all of you for your community activism here. We would not have known about this had you all not gotten active and had taken the time to study it and brought it to our attention. So you are all to be congratulated for the great work you are doing on behalf of both of these communities, which have legitimate reasons for deep concern about how this process is going to go forward.

Senator SHELBY. Thank you, Senator McConnell.

I just want to say, I think I brought up the word "transparency" earlier and I think it goes to the heart of this, because it has got to be trust, trust between the people who are going to destroy these very, very, very dangerous chemical weapons and the people that it could affect in God knows how many ways and the children.

But I also want to thank you for coming to the town meeting that I had in Jacksonville several months ago, when you asked me would I talk to Senator Stevens about holding this committee meeting. I think it was very instructive.

Mr. WILLIAMS. Thank you so much for doing that.

Senator SHELBY. But whatever we do, I believe this is an Appropriations Committee. This is where we fund things, and this is very expensive to do this, but nothing is more expensive than to lose people's lives or destroy their lives, destroy their communities, I think. Senator Stevens, the chairman of the full committee and the subcommittee here, pointed out we should leave no stone unturned as far as safety is concerned. I believe this. Senator Stevens has asked me to do this on behalf of the committee.

SUBCOMMITTEE RECESS

I want to thank you again for your testimony and also announce that the full Committee on Appropriations will meet next to consider Plan Colombia a week from today. The subcommittee now stands recessed. Thank you.

[Whereupon, at 12:23 p.m., Wednesday, April 25, the subcommittee was recessed, to reconvene subject to the call of the Chair.]

DEPARTMENT OF DEFENSE APPROPRIATIONS FOR FISCAL YEAR 2002

WEDNESDAY, MAY 9, 2001

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

The subcommittee met at 10:05 a.m., in room SD–192, Dirksen Senate Office Building, Hon. Ted Stevens (chairman) presiding.

Present: Senators Stevens, Cochran, Inouye, Leahy, Dorgan, and Feinstein.

DEPARTMENT OF DEFENSE

RESERVES

STATEMENT OF MAJOR GENERAL THOMAS J. PLEWES, CHIEF, ARMY RESERVE AND COMMANDING GENERAL, UNITED STATES OF AMERICA RESERVE COMMAND, DEPARTMENT OF THE ARMY

OPENING STATEMENT OF SENATOR TED STEVENS

Senator STEVENS. This morning the subcommittee will hear from the leadership of the Reserve components. Because of the number of witnesses, the hearing will be conducted in two parts.

We will hear from two panels. First, the leaders of the four Reserve forces, followed by the National Guard, so let me welcome Major General Thomas Plewes, Chief of the Army Reserve, Rear Admiral John Totushek, Chief of the Naval Reserve, Major General Dennis McCarthy, Director, Marine Corps Reserve, Affairs Division and Major General James Sherrard, Chief of the Air Force Reserve.

I congratulate each of you for your recent nominations for third stars. I think there is an increasing role and importance to the Reserve in our military strategy, and we welcome this move. All of your forces continue to make substantial contributions to the total force, and this committee wants to work with you as much as possible to address readiness and modernization requirements to the Guard and Reserve.

We have witnessed the results of these investments when the tremendous participation now of Guard and Reserve forces in all recent overseas contingency operations, as well as disaster relief and major training events throughout the United States. I think it is of tremendous importance to all of us that the Reserve forces and Guard forces are used in this manner. We still, however, have some problems, problems about tempo, recruiting and retention, and modernization infrastructure demands, and it is not going to be easy to deal with it.

My partner will be along in a little while. We will listen to his statement, but there is no question that we are going to try and assess your priorities and make sure that they are fully met. Each of your organizations continue to contribute a great deal to the total force. Let me start off first by calling on General Plewes.

General PLEWES. Mr. Chairman, thank you for the opportunity today to talk to you on behalf of the citizen soldiers of the Army Reserve.

Last month, the Army Reserve celebrated its 93rd birthday. This is a force that began with 160 doctors, and we have not forgotten our roots even as we have grown and matured. We remain an organization of trained professionals with civilian-acquired skills and talents to serve the Army, and we are able to protect and sustain ourselves in danger.

We are very busy these days, and we are proving every day that you can mobilize quickly and deploy swiftly. Wherever the Army has gone in recent years, the Balkans and Central America, the Gulf, East Timor, so has the Army Reserve. As of this year we have sent over 15,000 members of the Army Reserve to Bosnia and Kosovo. Today, over 2,000 of us are deployed around the world, offsetting the operational tempo of a very busy Active Army.

To meet this high operational tempo, the soldiers and units of the Army Reserve work very hard to be trained and ready. As a matter of fact, our readiness levels are the highest in our history, up 8 percent over the last 2 years alone. We are showing also that we are able to recruit a force of high-caliber citizens we need to accomplish our missions, and we are able to retain proven soldiers we need to meet our growing responsibilities.

After several years of a difficult recruiting environment, we met our recruiting and retention goals in fiscal year 2000. As I speak today, at the mid-point of fiscal year 2001, we are exceeding those goals. We are involved in transforming our Army into a more deployable, more lethal force. Additionally, we are taking on new missions and consequence management and information operations, and we take on these new missions with confidence.

The civilian-acquired skills of our Reserve soldiers put them on the cutting edge in the latest of technological innovation. We are inventorying those skills and making them available to the Army, with the understanding that these civilian skills are precisely what we need to counter the growing threats to our national security.

Our citizen-soldiers are doing great things. Our challenge is to provide them with the tools and support they need and deserve. One way is to increase full-time support. This is a critical item and critical to improve our readiness. There is a direct correlation between full-time manning and readiness, and Congress knows this.

Last year, Congress added 300 Active Guard and Reserve soldiers and 650 military technicians to our force this year, and we thank you. This is a great help, but we are still short of what we need to meet our validated requirements for full-time support. We also need to have compatible and modern equipment to perform our missions alongside of the Army.

We have developed creative methods to increase the life of what we have, including an initiative to place a good part of our equipment in long-term controlled humidity storage, but there is only so

much we can do on our own. Resourcing equipment, capitalization and modernization is essential to keep us the relevant force that we are today.

Our soldiers in the Army Reserve deserve good facilities in which to train and work. That is too often not the case. Our facilities are aging, and we are not putting the best face on the Army in the 1,100 communities in which we serve across this great country. We must work to make infrastructure improvements. This quality-of-life issue impacts on recruiting and retention and readiness and soldier morale. Our construction and real property maintenance programs unfortunately have needed the support of Congress every year.

PREPARED STATEMENT

Again, we appreciate your commitment to our soldiers. I thank you for the opportunity to brief you and I look forward to the opportunity to answer any questions you might have.

[The statement follows:]

PREPARED STATEMENT OF MAJOR GENERAL THOMAS J. PLEWES

INTRODUCTION

Mr. Chairman, members of this committee, thank you for the opportunity to testify on behalf of the more than 360,000 men and women serving in Army Reserve units and as individual mobilization assets—all soldiers of The Army. The United States Army Reserve, now 93 years young, enters the first century of the new millennium as an indispensable and strategically responsive force, an essential component of The Army.

The opportunity to testify before this subcommittee comes at a time of new challenges in which we are transforming our force in support of the Chief of Staff of the Army's Vision. The Army Reserve is no longer a force in reserve; it is integral to all Army operations today. Our task through the next decade is to remain flexible and responsive to the needs of our Army. "We Can Do!"

At the outset, I wish to convey my sincere appreciation to this subcommittee for its sustained, consistent, strong support of citizen-soldiers. Providing the opportunity to discuss the challenges we are faced with is another demonstration of your concern for our Reserve forces and how well they can fulfill the missions assigned to them.

The Army Reserve, the Army National Guard and the Active Army are full partners in the fully focused American Force that is the most responsive ground combat force in the world. Wherever the Army has gone, so has the Army Reserve. Wherever the Army is, so are we.

This is not rhetoric but plain truth: the U.S. Army today cannot perform its missions or meet its mission goals without the Army Reserve. We are being utilized more frequently than ever before, an indispensable Army partner, a new Army Reserve—one increasingly committed to our national defense in several important ways.

The scope and variety of Army Reserve activities illustrate the frequency that the Army Reserve is called upon as part of the Army in answering the nation's needs. Army Reserve soldiers continue to take part in every kind of mission we face at the beginning of the new century. These missions range from combat operations to peacekeeping, from disaster relief to major training events, both at home and abroad. We support communities as a hometown organization. We honor our past, but constantly prepare ourselves for the future.

The Army Reserve has played a vital Army role from major theater war to training the entire force. Army Reserve soldiers supported NATO operations in the former Republic of Yugoslavia and continue to support peacekeeping operations in Bosnia, Kosovo, and Southwest Asia. Additionally, Army Reserve civil affairs and logistics soldiers have even supported the U.S. mission in East Timor.

The Army Reserve's key challenges are the same as the rest of the Army—provide trained and ready units and soldiers. In order for the Army Reserve to maintain its many capabilities and continue to meet the requirements of the National Military Strategy, your continued support is vital to secure critical resources for full-

time support manpower, recruiting and retention, equipment procurement and modernization, information technology, and facility revitalization.

PEOPLE

Equal Opportunity

The Army Reserve is rich in diversity and gender mix. It's the nation's most culturally diverse and upwardly mobile reserve force in the military today. Minorities represent 40 percent of the soldiers in the Army Reserve, and they have, on their own merits, been promoted into the highest enlisted and commissioned officer ranks. This also holds true for women, which comprise 24 percent of reserve strength. Other impressive data include the facts that 57 percent of all the Black officers, 42 percent of all the Asians officers, and 39 percent of all the Hispanic officers in all the Reserve Components in DOD are in the Army Reserve. Our high minority population thrives in an environment that promotes the basic concepts of treating others with "Dignity and Respect". Our Equal Opportunity programs are well resourced. The return on that investment is handsomely represented in a force rich in cultural, ethnic and gender diversity.

RECRUITING AND RETENTION

An area of highest importance to the Army Reserve is recruiting and retention. The Army Reserve is a major participant in supporting and training a 21st century Army. This requires the best soldiers America can provide. In this regard, we are most appreciative of the help your committee has provided us. We certainly would be remiss if we did not thank you for the attention you have paid to our recruiting needs in recent legislation. With your help we were, for the first time in several years, able to meet our recruiting mission in fiscal year 2000, and at the mid-year point of fiscal year 2001, we have exceeded our mission.

The Army Reserve, in partnership with the United States Army Recruiting Command (USAREC), recently conducted a thorough review of Army Reserve Recruiting. This review has helped us forge a stronger relationship with the Recruiting Command and has streamlined our processes to support the symbiotic relationship between recruiting and retention. To that end, we are doing the following:

—We are seeking to ensure that all Army Reserve soldiers are involved in recruiting and retention activities—we all are a part of the Army's recruiting efforts.
—We are removing mission distracters allowing the Recruiting Command to focus on their core competency of recruiting non-prior service applicants.
—We are focusing on life cycle personnel management for all categories of Army Reserve soldiers, troop unit members, and soldiers in the Individual Ready Reserve. We are ensuring that career counselors talk to Army Reservists about joining the Active Guard Reserve (AGR) program, training to become Warrant Officers, or Commissioned Officers, and we are sharing opportunities available in our troop units.
—Our retention program seeks to reduce attrition, thereby improving readiness and reducing recruiting missions.
—And we are jointly working with the Recruiting Command to ensure AGR personnel assigned to that command are given leadership and professional growth opportunities.

This fiscal year we commenced these activities by transferring responsibility for the prior service mission from the Recruiting Command to the Army Reserve. This transition will occur in a phased process that culminates in fiscal year 2003. Tenets of this transfer include: establishment of career crosswalk opportunities between recruiters and retention transition NCOs; localized recruiting, retention and transition support at Army Reserve units and increased commander awareness and involvement in recruiting and retention efforts.

We expect to reduce attrition and improve recruiting efforts by reducing no-shows to initial active duty training, highlighting all Army Reserve personnel life cycle opportunities and improving delivery of recruiting promises. In Phase I of the prior service mission transition, we transferred 61 recruiters from USAREC and assigned them to Reserve Centers within the southeastern United States and Puerto Rico. The assignment of new Retention NCOs will allow the Army Reserve to lower its attrition significantly and to ensure prior service soldiers are provided opportunities in our units, and assist our commanders in delivering recruiting promises. With the beginning of Phase II, the total Army Reserve Retention and Transition Division (RTD) mission will increase to 10,000 prior service transfers. We will continue extensive collaboration with USAREC to ensure a smooth transition of these responsibilities.

To support these efforts, the Army Reserve uses the non-prior service and prior service enlistment bonuses, the Montgomery GI Bill (MGIB) Kicker and the Student Loan Repayment Program in combinations to attract soldiers to fill critical MOS and priority unit shortages. Program funding must be sufficient to attract and retain both prior and non-prior service soldiers. The Army Reserve must be able to provide a variety of enlistment and retention incentives, for both officer and enlisted personnel, in order to attract and retain quality soldiers.

Our new retention program is a success. Faced with an enlisted attrition rate of 37.5 percent at the end of fiscal year 1997, we adopted a corporate approach to retaining quality soldiers. Retention management was a staff responsibility before fiscal year 1998. In a mostly mechanical approach to personnel management, strength managers simply calculated gains and losses and maintained volumes of statistical data. Unfortunately, this approach did nothing to focus commanders on their responsibility of retaining their most precious resource—our soldiers.

To correct this shortcoming, the Army Reserve developed the Commander's Retention Program. A crucial tenet of this program places responsibility and accountability for retention with commanders at every level of the organization. Commanders now have a direct mission to retain their soldiers and must develop annual retention plans. Additionally, first line leaders must ensure all soldiers are sponsored, receive delivery on promises made to them, and are provided quality training. In this way, the Commander's Retention Program ensures accountability because it establishes methods and standards and provides a means to measure and evaluate every commander's performance. Since the introduction of the Commander's Retention Program, the Army Reserve has reduced enlisted attrition by nearly 5 percent. The enlisted attrition rate in fiscal year 2000 was 28.9 percent. However, persistent pressure from increased job market competition that is intensified by a robust economy makes it difficult to maintain this degree of improved retention. Consequently, funding delays and projected program shortages threaten our goal of continuing to reduce attrition.

The Army Reserve also is experiencing a company grade officer shortfall. Retention goals focused commanders and first line leaders on junior officers, as well.

Our retention program seeks to reduce attrition, thereby improving readiness and reducing recruiting missions. Our retention efforts bore fruit earlier this year with a 1,200 non-prior service recruit mission reduction to USAREC. Given our current strength posture and attrition outlook, another mission reduction is being assessed.

The Army Reserve will successfully accomplish its 43,000 recruiting mission for fiscal year 2001 while achieving the Department of the Army and Department of Defense quality marks. Next year our enlisted recruiting mission will stabilize at about 42,000 due to the success of our retention efforts. The accomplishment of the recruiting mission will demand a large investment in time on the part of our commander's, our retention NCOs, and our recruiters as they are personally involved in attracting the young people in their communities to their units.

However, the same environmental pressures that make non-prior service recruiting and retention difficult affects prior service accessions. With the end of the defense drawdown we have seen a corresponding decrease in the available prior service market as reflected in the IRR. This has meant greater training costs, due to the increased reliance on the non-prior service market, and an overall loss of the knowledge that comes when NCO leadership fails to transition to the Army Reserve. Consequently, the Army Reserve's future ability to recruit and retain quality soldiers will be critically dependent on maintaining competive compensation.

Additionally, the young people of today need to be made aware of the unique opportunities available in the different military components. The best way to get this message out is to advertise through the mass media. Special attention needs to be placed on the recruiting budget, especially for advertising, to meet our requirements in the next several years. Funding our critical advertising needs is imperative if we are to be honestly expected to meet our recruiting goals. Your continued support of our efforts to recruit and retain quality soldiers remains essential if we are to be successful.

READINESS

Over 84,000 Army Reserve soldiers mobilized and served in Desert Storm. We were ready then, and are ready today. We continue to improve Duty Military Occupational Skill Qualification (DMOSQ). The Army Chief of Staff set a goal for the Reserve Components to achieve and sustain an 85 percent DMOSQ and Professional Development (PDE) qualification level by fiscal year 2005. Recent increases in funding have raised both DMOSQ and PDE qualification rates by several percentage points. The Army Reserve is projecting that DMOSQ rates will climb to 85 percent

by fiscal year 2005 and NCOES qualification rates will achieve 85 percent by fiscal year 2004 due to programmed increases to our funding level. We also continue to aggressively manage and monitor soldiers attending DMOSQ to achieve this goal. Your continued support of our mutual goal to have a trained and ready force remains essential to our success.

Unit readiness improved 8 percent in the past two years. Force Support Package (FSP) units average 88 percent deployable readiness. The Army Reserve's readiness status continues to improve. As of January 2001, 75 percent of our units meet deployment standards, an 8 percent increase over the previous two years. At the same time, the readiness level of FSP units remained constant. The Army Reserve continues to achieve a high number of units rated deployable, despite having the lowest level of full-time support of any reserve component. Today's readiness levels are a testimony to the Army Reserve's ability to adapt and succeed in our assigned mission.

RELEVANCE

As I testify today, we have over 1,400 Reserve soldiers supporting contingency operations in Operations Joint Forge and Joint Guardian (Bosnia and Kosovo) in the European Theater. These Reservists comprise the latest rotation in support of operations spanning five years and totaling over 16,000 troops, and we remain heavily employed. Overall in fiscal year 2000 the Army Reserve deployed over 71,000 soldiers to 64 countries, and we provided a total of 3.5 million mandays in the United States and abroad. Employments were worldwide from Central America and Southwest Asia to places like East Timor. Furthermore, the Army Reserve did this at the same time that it achieved its highest readiness status in history. As of January 2001, 82 percent of our units reported being combat ready, up from 79 percent just two years ago. Much of this achievement was the direct result of your support to improve our full-time manning and provide the funding required for our operating tempo and training requirements.

We are a force sized and ready to fight full-scale war as well as support smaller scale contingencies. We bring trained units who can get to where they are needed quickly and then perform as a seamless part of the Army team. We bring professionals from the civilian world, leaders and experts in many fields, with skills and abilities the Army may not have or cannot afford to develop or sustain. We are as accessible as any component of any service, ready to respond to the needs of the National Command Authority.

The Army Reserve continues to support Active Army exercises, operations, and training worldwide. Some of the major exercises and training events supported included: BRIGHT STAR, NEW HORIZONS, Operation JOINT GUARD, Operation JOINT FORGE, and many National Training Center/Joint Readiness Training Center rotations.

For the last year, Army Reservists have been deployed simultaneously to two troubled parts of the world, in Europe for Operation JOINT FORGE (Bosnia) and JOINT GUARDIAN (Kosovo) and in Southeast Asia for Operation STABLISE (East Timor).

Worldwide deployments are nothing new for the soldiers of the Army Reserve. Since 1995, more than 16,000 Army Reservists have participated in Operations JOINT ENDEAVOR, JOINT GUARD, and now JOINT FORGE, either in Bosnia or in support operations in neighboring countries, and in Operation JOINT GUARDIAN in Kosovo. The Army's reliance on the Army Reserve's capabilities, especially in such areas as civil affairs, medical, engineering, logistics, transportation, military police, postal, public affairs and psychological operations, will ensure the Army Reserve will be in the Balkans as long as the Army remains there.

When not working alongside their active Army, Army National Guard and sister services, Army Reserve soldiers honed their always-in-demand skills on exercises.

More than 2,000 soldiers from 46 units took part in the annual TRANSLOTS exercise in June, using landing craft to unload equipment and then truck supplies to the "front lines". For the first time, this annual transportation exercise was run in conjunction with the annual ROVING SANDS exercise, a joint-theater air and missile defense exercise that involved more than 18,000 troops from several nations. More than half of the units for TRANSLOTS were from the Army Reserve, to include the lead unit for the exercise, the 143rd Transportation Command from Orlando, Fla. Army Reserve units were also significantly involved in ROVING SANDS.

Hundreds of Army Reserve Military Police soldiers from the 77th and 99th Regional Support Commands trained to handle enemy prisoners of war by setting up and operating two internment facilities and a corps level internment operation during Exercise PLATINUM SWORD 2000 at the Army Reserve installation at Fort

Dix, N.J. Prior to conducting this hands-on exercise, the soldiers prepared with a simulation exercise hosted by the Battle Projection Group of the Army Reserve's 78th Training Support Division. All of the Army's Internment/Resettlement brigades are Army Reserve units.

Army Reserve soldiers trained overseas, as well as in the United States. For the first time since 1995, U.S. soldiers, sailors, airmen and Marines returned to the Philippines to conduct the BALIKATAN exercise with the Philippine Armed Forces. Army Reservists played key roles in this exercise, to include an Army Reserve officer serving as the U.S. co-exercise director for the combined force.

As has been demonstrated by our ever-present use in operations and exercises, so, too, does the Army Reserve's role in contributory support demonstrate that the Army Reserve is no longer a "for emergency use only" organization.

We are utilized in every way, contributing daily to the Army. This support reduces operational costs, increases efficiency and provides excellent production-based training opportunities. Our soldiers benefit from this contributory support by performing challenging, time-sensitive missions. Soldiers do not like make-work missions. They want to do something meaningful something, which has a benefit and a purpose, which offers a challenge. We have moved from a training model of "train, then do" to "train and do." Army Reserve soldiers rise to that challenge constantly.

Army Reserve Materiel Management Commands conduct year-round resupply operations for active Army units in Southwest Asia and the National Training Center in California. Army Reserve intelligence centers at Fort Gillem, Ga., and Fort Sheridan, Ill., provide strategic analysis for the Army on a full-time basis. This seamless support of real-world missions clearly demonstrates how effectively Army Reserve units integrate into the Army.

Contributory support helps the Army focus its active forces on their primary warfighting tasks. Another way we help the Army concentrate on warfighting is in our core competency of training.

Through focus on our part of the training function, we help the Army return soldiers to combat divisions. Army Reserve soldiers are fully integrated into every aspect of training. Our soldiers provide quality training to soldiers and units from all components.

Army Reserve Institutional Training Divisions provide skill, leadership, and professional development training. They also provide basic combat and one station unit training at Army Training Centers. Army Reserve Training Support Divisions provide collective lanes and simulation training to units of all three Army components.

The Army Reserve Readiness Training Center (ARRTC) at Fort McCoy, Wis., which provides a myriad of training support to all components of the Army, is developing a well-earned reputation as a center of training innovation. Army Reserve, as well as Army National Guard and Active Component soldiers, can now graduate from a Military Occupational Skill (MOS) producing school by taking an interactive, distance-learning course, developed and taught by ARRTC, using off-the-shelf civilian equipment.

Another innovation at ARRTC is the mirror site classroom (so-called because it "mirrors" the training offered at the Army Computer Science School at Fort Gordon, Ga.) used to provide security certification instruction to information system administrators. ARRTC conducts this training with a ground-breaking single classroom setup, using a single set of computers, thus saving scarce resources and serving as a model for future planned mirror sites.

The Army Reserve is well placed to benefit the Army in finding innovative ways to do business because of the civilian acquired skills of our soldiers. Our soldiers bring their civilian acquired skills, talents and experience with them. This has been true from the beginning of the Army Reserve: the very first Reservists were civilian doctors who could be called up in time of emergency.

Civilian technological advances are taking place at a dramatic pace. Army Reserve soldiers who take part in these advances in their civilian jobs are ideally placed to bring them into the Army for its benefit.

To better capitalize on the "citizen" part of "citizen-soldier", the Army Reserve is collecting information on the civilian skills of its soldiers, skills acquired outside the Army and thus perhaps unknown to it.

Army Reservists can now input those skills into the Civilian Acquired Skills Database (CASDB) at the Army Reserve Personnel Command (AR–PERSCOM). By going to the website at www.citizen-soldier-skills.com, soldiers can enter those skills they obtained from civilian training or work experience. Soldiers who volunteer to register their civilian acquired skills are afforded the opportunity to serve in duties outside of their traditional branch or MOS. CASDB gives commanders at all levels the means to identify those soldiers with specific skills to meet special needs. Those skills and talents can then be used to benefit the Army Reserve, the Army and the

nation. Using our skills in the information area is one part of our strategy for assisting the Army to become a more strategically deployable and responsive force. By leveraging advanced communications and information technology, we can conduct split-based support operations. Army Reserve units can operate from home station to accomplish missions in forward locations utilizing this technology, thus reducing lift requirements. We are evolving our support organizations to build a reach-back capability for logistics, intelligence, and training support, thereby reducing the deployed logistical footprint.

We will also reduce lift requirements by strategically stationing Army Reserve equipment and forces, capitalizing on our forward-stationed Reserve units and soldiers, such as the 7th Army Reserve Command in Europe and the 9th Regional Support Command in the Pacific.

Since Army Reserve power projection units have key roles in moving the Army overseas and receiving deployed units once they arrive, it is vital we get our own equipment—that not already strategically positioned—overseas quickly. An innovation now underway to better facilitate deployment response times is the Strategic Storage Site (SSS) Initiative. Our goal is to maintain 37 percent of our equipment in these sites. Besides improving equipment readiness and maintenance operations, this equipment, located at strategic ports around the country, will be immediately ready for deployment. The initial Strategic Storage Site is a 150,000 square foot facility at Gulfport, Miss. Six to seven SSS facilities are planned.

Consequence Management

The Army Reserve is ready to answer our Nation's call at home, too. Should terrorists strike the American homeland, Army Reserve units and soldiers, possessing a variety of capabilities, would be immediately available. These units include chemical detection and reconnaissance companies and medical and medical support organizations, all ready to support civil authorities should disaster strike. As should be expected, we train for this worst-case eventuality diligently. One such training exercise involving Army Reserve units, the Air Force Reserve, other Defense Department and U.S. agencies, as well as state and local agencies, was CONSEQUENCE MANAGEMENT 2000, held last May at the Regional Training Site—Medical at Fort Gordon, Ga.

The Army Reserve is ideally placed for civil support. Our units are stationed in Hometown, U.S.A., with our soldiers located in 1,200 Army Reserve Centers in towns and cities all across America, putting the Army's footprint in every part of our country. They are part of America's communities because those communities are their communities. Our soldiers are the local doctors, nurses, teachers, lawyers, police officers, Little League coaches and soccer moms and dads, who enable the Army Reserve to respond with a multi-faceted capability. We provide key emergency preparedness leaders. Army Reserve Civil Affairs units contain 97 percent of the Army's expertise to rebuild shattered infrastructure—social, civil and physical. Military Police units can shelter up to 56,000 displaced persons. The Army Reserve, ready to respond to a chemical incident, contains 63 percent of the Army's chemical capability. Today, the Army Reserve has the largest chemical decontamination capability within DOD. The Army Reserve is currently training 100 out of a total of 127 decontamination platoons and 8 of the 15 reconnaissance platoons called for in Defense Reform Initiative Directive 25.

Our medical professionals are working closely in DOD and among the interagency community to leverage our capabilities in Weapons of Mass Destruction (WMD) Consequence Management. Residing within the Army Reserve are 68 percent of the Army's medical assets. The Army Reserve contains 50 percent of resourced Mortuary Affairs units, 83 percent of Psychological Operations units, as well as Aviation, Logistics, Engineer and Signal units, which are essential capabilities for WMD Consequence Management. The Army Reserve stands ready to support WMD Consequence Management operations in combat, in the homeland or overseas in support of our coalition partners.

The challenge of defending America's Homeland continues to grow. Although the Army Reserve is not a "first responder" organization, it is ready to provide assistance to support and sustain those organizations that do respond first. The Civil Support mission requires capabilities resident in the Army Reserve.

Civil Support and Weapons of Mass Destruction (WMD) operations are combat support and combat service support intensive. Army Reserve core capabilities enable the Army to provide rapid support that complements the Federal response that sustains local responders.

As a community-based force, the Army Reserve is—by definition—America's people. We are a reflection of the values and traditions embodied in our culture. Those values and traditions are what make the Army Reserve, the National Guard and

the Army strong, able to meet the Nation's missions for the past 225 years and continuing into the new millennium. The men and women of the Army Reserve, all of whom volunteered to be "twice the citizen", have taken on the sacrifices to serve the Nation. In their hands is the future of the Army Reserve.

Information Operations

We use Information Operations (IO) to defend our own information and information systems while disrupting those of the enemy. IO ensures that our leaders have the information they need, when they need it, in a form they can use to win the fight and protect America's vital interests.

These are not new concepts. The Army has long understood the importance of controlling the decision cycle. Units with IO capabilities that intercept or interrupt communications, that collect and analyze information about the battlefield and that influence the attitudes and will of the opposition, are a legacy in the Army Reserve structure. The Army Reserve provides a wide variety of experts who accomplish missions, such as Civil Affairs, Psychological Operations, Public Affairs, Military Intelligence and Signal. The Land Information Warfare Activity (LIWA), the National Ground Intelligence Center and the Joint Reserve Intelligence Program now are utilizing Army Reserve units, facilities and personnel to conduct Information Operations.

The Army Reserve also is building additional capability to reinforce Army information and LIWA operations. The Army Reserve Land Information Warfare Enhancement Center directly expands the scope and sophistication of LIWA information capabilities. When complete, one-fifth of LIWA manpower will be Army Reserve soldiers. The Defense Information Systems Agency has created a 22-member Joint Web Risk Assessment Cell. This cell will monitor and evaluate Department of Defense web sites to ensure no one compromises national security by revealing sensitive defense information. Five members of this cell, whose civilian skills are particularly suited to this hard skill requirement, are Drilling Individual Mobilization Augmentees of the Army Reserve.

Further, the Army Reserve is actively carving its niche in this evolving area of cyber warfare by creating the Reserve Information Operations Structure. This organization will be activated to provide contributory support to the Army's Computer Network Defense and information assurance efforts. Army Reserve Information Operation Centers (IOCs) identify and respond to viruses and intruders in Army computer networks. Currently, Army Reserve IOCs are forming in the National Capital Region, Massachusetts, Pennsylvania, California, and Texas, and satellite units can be found in over a dozen large cities. Information Operations support the Army's portion of the Defense Information Infrastructure to ensure the availability, integrity and confidentiality of information systems.

Counter Drug Operations

The Army Reserve provides intelligence, linguistic, transportation, maintenance, and engineer support to drug law enforcement agencies and unified commanders-in-chief in an ongoing program in effect since 1989. The Army Reserve supports local, state and federal law enforcement agencies in operations designed to reduce the flow of illegal drugs both within and outside of American borders. Feedback from High Intensity Drug Trafficking Area directors was overwhelmingly positive. The Army Reserve also participates with the Drug Demand Reduction Program to help reduce the demand for illegal drugs and alcohol abuse through education and through deterrence by randomly testing our soldiers on a regular basis. We received a program funding increase to raise our testing level to more closely match the Active Component testing level. The increased funding also allows the retention of those civilians most critical to program administration.

RESOURCING

Resourcing is a difficult subject to discuss at this time because we don't as yet have complete details of the Defense portion of the President's Budget pending completion of the ongoing strategic review. However, I do wish to discuss several challenges we face in providing the Army Reserve the resources it needs. At the outset, I would like to emphasize that many of our resourcing challenges are a consequence of our being victims of our own success. Successful operations lead additional successful operations down the road. This increases operating tempo and personnel tempo costs and puts stress on personnel, equipment and facilities with bills that ultimately must be paid.

Modernized Equipment Procurement is a Challenge for the Army Reserve

The compatibility of current Army Reserve equipment with the Active Component is a great challenge. As a result of incremental modernization of Army units, the Army Reserve equipment compatibility and unit interoperability require constant attention. The dynamic global environment requires that military forces have the added flexibility of modern equipment systems. To meet challenges of future operating environments and the wide range of potential threats, the United States will require an agile, world class Army capable of rapid response and dominance across the entire spectrum of operations in a joint, interagency, and multinational environment. Increasing demands signify the Army Reserve must be properly equipped to perform the mission. Moreover, the increased use of Reserve forces in support of operational missions has highlighted the importance of having compatible and modern equipment. The Army Reserve must be seamlessly integrated into contingency operations and wartime scenarios. Key to this integration is ensuring equipment is both operationally and logistically compatible. Without complete interoperability, the capacity of the Army Reserve to offer combat support and combat service support would be degraded, and the effectiveness of the force would suffer.

The Army's goal to improve compatibility incrementally, within the constraints of the Total Obligating Authority becomes a question of affordability. Because the Army Reserve is dealing with limited funding, creativity in developing ways to stretch these funds and extend the life of existing equipment is essential. The Army Reserve increasingly relies on limited overhaul and re-build programs of existing equipment to extend service life, to reduce operating costs, and improve system reliability, maintainability, safety, and effectiveness. Army digitization initiatives may accelerate incompatibility and obsolescence of equipment when supported forces are digitized and Army Reserve forces are not.

Military Construction

The Army Reserve Installation Community proudly sustains two of the Army's major Installations and 12 Regional Support Commands. These regional commands function as "virtual installations" with facilities in 1,200 sites across all 50 states, most U.S. territories, and in Europe. As of this fiscal year, the Army Reserve military construction backlog is $2.25 billion. We are constructing on average only 5–6 new facilities per year.

Army Reserve infrastructure is deteriorating, and this adversely affects soldier training and readiness on a daily basis. Quality, well maintained facilities provide Army Reserve units with the means to conduct necessary individual and collective training, to perform operator and unit maintenance on vehicles and equipment, and to secure, store, and care for organizational supplies and equipment. These facilities also provide other important benefits. Fully functional and well-maintained training centers have a positive impact on recruiting and retention, unit morale, and the readiness of the full time support personnel who work in the facilities on a daily basis. In addition to supporting the quality of life of units and support staffs, Army Reserve facilities project an important and lasting image of America's Army in the local community.

Sustainment, Restoration and Modernization

Historically, Army Reserve Sustainment, Restoration and Modernization (formerly known as Real Property Maintenance) has been inadequately resourced. To train our citizen soldiers, we use more than 45,000,000 square feet of widely dispersed Reserve Centers and support facilities worldwide. This equates to more square footage than Forts Hood and Sill combined, with Fort Belvoir thrown in for good measure. Like these posts, we experience inherently the same challenges, but in a different setting.

For today's Army Reserve soldier, the impact of poor facility conditions is even more acute. Overcrowded, inadequate and poorly maintained facilities seriously degrade our ability to train and sustain units and weaken soldier morale and esprit de corps. Years of inadequate resources have brought to this state of deterioration and disrepair. For eight of the past ten years, we've been functioning on less than 40 percent of required funding to sustain existing facilities. Couple these facts with the advancing age of the inventory, greater mission demands, and a shifting population; it's easy to see that we are in a facilities death spiral unless resources are immediately applied.

Most Army Reserve facilities consist of 1950's era, red brick, flat roofed, tired looking structures that remain virtually the same as when they were constructed. They're sorely in need of modernization or, as in most cases, replacement. Our primary facilities, Army Reserve Centers, are prominent symbols of The Army on "Main Street America." They often create the first and lasting impressions of the

entire Army and stand as permanent "billboards" for all Americans to see. However, we have hundreds of deplorable facilities that siphon off an inordinate amount of our maintenance and repair dollars. Given current Sustainment, Restoration and Modernization funding, we're unable to break free from sustainment and begin improvements on our facilities.

Additional funding will prevent further facility deterioration and premature aging, improve the environment in which our soldiers work and train, promote and project a positive Army Reserve image in communities across the country, and enhance recruiting and retention efforts for all components of the Army. We're replacing the aging inventory at the rate of five or six centers at a time, but it's not enough. We've developed an overall strategy to modernize our Army Reserve facility inventory in concert with the Army's Facility Strategy that establishes a focused 30-year roadmap for active and reserve components to sustain facilities and to focus modernization funding, principally military construction, in 10 year program increments. The first modernization increment calls for replacement of one-third of the Army Reserve Centers but without resources the plans falls apart. We have the will to succeed, but resources are the essential yet elusive key to success.

Recruiting and Retention Bonus Programs and Increased Army Reserve Advertising

Recruiting resources pay dividends beyond the year of execution. For example, Army Reserve advertising in fiscal year 2002 influences potential recruits making enlistment decisions in fiscal year 2003–2005. Thus, we must look at recruiting resources over time and not limit consideration to the current or next fiscal year.

Resourcing the Army Reserve sufficiently to achieve its average recruiting workload over the next several years enables the Army Reserve to achieve its end strength. A steady, even flow of resources ensures a better recruiting environment.

Media advertising costs continue to increase. Television is most effective at targeting desired Army audiences because it dramatically illustrates the Army experience through sight, sound, and motion. Successfully meeting the recruiting mission, which we did in fiscal year 2000, following several years of failure, comes from many complex and rapidly changing factors. The recruiting advertising program, however, is one of the few factors that we can control.

FULL-TIME SUPPORT

An increase in Full-Time Support (FTS)—Active Guard/Reservists (AGRs) and Military Technicians (Miltechs)—is essential to improve Army Reserve readiness. One of the greatest challenges facing the Army Reserve today is an insufficient number of FTS authorizations to support over 2,300 Army Reserve units in day-to-day operations. FTS levels directly impact the readiness of Army Reserve units by providing the additional training, command and control, technical, functional, and military expertise required to transition from a peacetime to a wartime posture. The FTS staff performs all the day-to-day support functions for the unit. When FTS levels drop, this affects readiness levels.

The Army has identified critical thresholds for FTS, based on the minimum essential levels to prepare and maintain units to meet deployment standards identified in Defense Plans. The fiscal year 2003 transformation of the Army's go to war structure includes eliminating approximately 300 Title XI Active Army authorizations from Army Reserve units. As a coordinated "Army" decision, the Army Reserve AGR resource ramp will be accelerated by 300 beginning in fiscal year 2003. The goal is to restore the loss of Active Army end strength from Army Reserve units with AGRs while continuing to work towards improving the overall unit readiness with increased full-time support.

Congress has been sensitive to the importance of FTS, and we are grateful for the fiscal year 2001 Congressional increase in AGRs and MILTECHs. This increase reduced the Army Reserve FTS shortfall by almost a thousand (650 MILTECHs and 300 AGRs). Additional authorization increases are essential for the Army Reserve to meet acceptable readiness standards.

SUMMARY

For 93 years, the United States Army Reserve has served as a community-based federal force of trained and ready units and individuals supporting The Army, here and abroad. We are adaptable, relevant and an integral part of The Army. We stand ready to answer the call and with that bring the support of Hometown, USA to the forefront, demonstrating the resolve of the American people. The citizen-soldiers of the Army Reserve are proud of their country. They share a deep sense of satisfaction and accomplishment in the peace and stability they help create on behalf of all Americans. We are grateful to the Congress and the Nation for supporting the Army

Reserve and our most valuable resource, our soldiers—the sons and daughters of America. Thank you.

Senator STEVENS. Thank you very much. We have been joined by my partner here. Would you like to give us your opening statement, Senator?

STATEMENT OF SENATOR DANIEL K. INOUYE

Senator INOUYE. Thank you very much, Mr. Chairman. I would like to join you in welcoming our witnesses this morning, and I think we all know that since the very beginning of our Nation we have depended upon our citizen-soldiers. At that time, they were State militias, the forerunners of our National Guard, and I think most of our school kids are well aware of the Minutemen. You are their successors. I look upon the Reserves and the Guard as an essential part of our defense, one that deserves our full support, and should not be and cannot be short-changed.

Over the years, there have been disagreements between active and the Reserve forces. I am pleased that most of these problems are past history, but there are many other concerns. We find that it is still difficult to convince the active component to procure new weapons for the Guard and Reserves. All too often you have been getting the left-overs. I am certain you know that with our budgetary picture of today, and with transformation in the works, it is going to get a bit more difficult to get more weapons. I hope we can do so in this cycle.

Needless to say, military construction remains a real problem, and here again I am certain the chairman can come up with something. Our Reserve forces are being called on to serve more often and in more challenging missions, but it is difficult to get the full-time support that they require.

So Mr. Chairman, I thank you for holding these hearings, and I look forward to hearing the testimony of our witnesses. This is an important part of our defense.

Senator STEVENS. Senator Dorgan, do you have a comment?

Senator DORGAN. Mr. Chairman, I have, as perhaps you do, two other subcommittees meeting at the same time, and let me thank the officers of the Reserve and National Guard for being here. We get a lot of bang for the buck, as I think the chairman and others have said. It is an awfully good investment. We thank them for their service to our country, and I am anxious to hear their testimony today.

Senator STEVENS. Thank you.

Gentlemen, we have already heard from General Plewes. We would now like to call on Rear Admiral Totushek.

STATEMENT OF REAR ADMIRAL JOHN B. TOTUSHEK, CHIEF, NAVAL RESERVE AND COMMANDER, U.S. NAVAL RESERVE FORCE, DEPARTMENT OF THE NAVY

Admiral TOTUSHEK. Thank you, Mr. Chairman, members of the committee. Thank you for allowing me the opportunity to talk to you about some important issues that are affecting the Naval Reserve today. A few months ago, I had the pleasure of briefing my top five priorities to our Chief of Naval Operations, Admiral Vernon Clark, a former Naval Reservist himself.

In March, I had the honor of briefing the House Armed Services Personnel Subcommittee on my highest priority, which is manpower. Today, I am pleased to be before you to talk about each of my top five, manpower, training, equipment compatibility, force-shaping, and fleet support.

MANPOWER

Allow me to explain a little bit about my priorities, starting with manpower. I have stated many times that whatever else we will do, it will not matter much unless we can recruit and retain a well-trained career force. This is key to our success, and it is why we are offering bonuses for reenlistment extension. A Montgomery kicker bill increase of $200 per month for undermanned ratings, a program to allow conversions to undermanned ratings and benefits, such as space-available flights.

Clearly, recruiting remains a constant priority of mine in an economy with a record-low unemployment rate, and where the perception is that the active force and by extension the Reserve force is shrinking. The fact is, the Naval Reserve offers career-building jobs with extraordinary benefits to qualified people. Our challenge is to identify them, introduce them to the opportunities we offer, sign them up, and meet our end strength targets.

To do so, we have added more than 90 Reserve recruiters, tripled our advertising budget to $8 million annually, individually contacted service members scheduled to leave duty, built ties between the active and Reserve recruiters, and better defined the career progression for my recruiting professionals.

In addition, we are adding new nonprior service programs that targets medical and seabee skills. My most pressing funding needs are in the areas of recruiting, advertising, and additional bonus money to entice sailors to change from our overmanned ratings to those that are undermanned.

With regards to my training priority, we have Naval Reservists drilling in every State in the Nation. Some are close to their gaining commands in naval facilities, but the majority are not. It is vitally important that we provide realistic training that meets the Navy needs, whether our units are in Alaska or Nebraska.

TRAINING

There are some promising developments in the works using new technologies, but we need to continue to think innovatively to conduct more practical training. Additional duty training (ADT) school funding will be needed to give our selected Reserve in all States the opportunity to satisfy their training requirements and to be able to advance in rate. Lastly, we need to increase inactive duty training travel (IDTT) funding so that our heartland reservists can visit their gaining command every quarter.

AIRCRAFT UPGRADES

Shifting gears to equipment and information technology (IT) compatibility, the two critical funding priorities of the Naval Reserve for the near term are aircraft upgrades and information technology

improvements. When completed, these initiatives will provide the Naval Reserve force much-needed interoperability.

On the air side, that means replacing my aging C–9 skytrain fleet. In April, we received the first C–40A clipper, and we will receive an additional two C–40's by August of this year. The new aircraft will allow us to continue our mission of providing 100 percent of the Navy's worldwide in-theater medium airlifts in support of the fleet, at the same time ensuring the safety of our sailors and Marines, while meeting the new noise and emissions standards. Our goal is to replace all 27 of our aged C–9 aircraft, which will require a procurement rate of three per year.

In addition, two of our four F/A–18 Hornet squadrons will benefit from the purchase of 28 upgrade kits that will improve radar systems, armament controls, weapons-station wiring and cockpit indicators. We are pursuing funding to purchase additional kits for our third squadron.

INFORMATION TECHNOLOGY

On the IT front, information technology affords us new possibilities for improving efficiencies. For example, we have embarked on IT upgrades that will streamline the process of getting the right sailor to the right place at the right time every time. Under the New Order-Writing (NOW) System applications for active duty will become much more automated, which will generate orders and travel itinerary with a dramatically shorter lead time.

Correcting deficiencies, and maintaining existing IT Legacy systems built on eighties technology continues to place a strain on my Operations and Maintenance (O&M) appropriation. We need to invest in new systems with data bases that are compatible. We are a key player in the Navy-Marine Corps Internet (NMCI). We are working with Navy to ensure that the Reserve NMCI needs are met. However, additional dedicated investments in O&M funds need to be made to enable our upgrade of IT systems to take advantage of NMCI.

FLEET SUPPORT PRIORITIES

Lastly, but no less important, my force-shaping and fleet support priorities. In some ways, the Naval Reserve is in an enviable position. The active duty Navy has an increasing need and appetite for Reserve skills. Many reservists possess skills gained in the civilian workforce for which there is no direct operational counterpart in the active force, and we work closely with active manpower personnel on a daily basis to better shape my Reserve force to meet fleet needs.

Though mobilization remains our primary mission, we have provided close to 2½ million man days support to the fleet in fiscal year 2000, and for fiscal year 2001, Congress added $13 million to ADT training for fleet support, and $23 million to Annual Training, which has allowed unprecedented levels of assistance to the fleet. Additional ADT fleet support funding will likewise be needed this year to meet anticipated demands.

In summary, Mr. Chairman, the Navy's ability today to tap into its Reserve force is the reward of prudent investment in Reserve people, equipment, IT, facilities, and training. As with Navy, addi-

tional funds will be needed to support the challenged Reserve programs I have just outlined to ensure that we will be able to continue essential day-to-day peacetime support to the fleet, and preserve the capability to surge decisively in a time of war.

PREPARED STATEMENT

Thank you again, sir, for allowing me the opportunity to appear before the committee, and I look forward to any questions you may have.

[The statement follows:]

PREPARED STATEMENT OF REAR ADMIRAL JOHN TOTUSHEK

INTRODUCTION

One of my greatest satisfactions from my tour as Chief of Naval Reserve is the acknowledgement by the Active Navy that the Naval Reserve is crucial to their mission success. As this Subcommittee knows, there had been reluctance by many to accept the fact that active duty missions cannot be accomplished without the Reserve components. Indeed, beyond the value of their military specialty training and training for mobilization, Reservists provide an essential link to American society. In many parts of the country, Naval and Marine Corps Reservists are the only representatives of the Department of the Navy.

Yet despite our noteworthy accomplishments, we find ourselves at a paradoxical crossroads, because our own recruiting and retention efforts have been challenged by a near full-employment economy, when, at the same time, the active force is relying more heavily on our Reserve support to reduce stress on active PERSTEMPO. With an expanded role to provide trained and equipped, cost-effective support to the fleet, and an aging fleet of Reserve aircraft and ships, I believe strongly that now is the time when we must make further investments in the Reserve Forces of the United States.

I am confident that we are strengthening our management, increasing our recruiting and retention efforts, and continuing to equip and modernize our Naval Reserve Force to the best of our abilities: all to meet the Navy's day-to-day challenges and maintain readiness for wartime missions. As I briefly describe the status of our Reserve Force, I will also explain my "Top Five" priorities, which are the core issues I am focusing on to fully achieve the goals I have set for the Naval Reserve Force of the future. As I discuss these priorities in detail, you will notice that they closely align with the top priorities of our Chief of Naval Operations (CNO).

PAYING DIVIDENDS TODAY!

As I consider the status of the Naval Reserve Force in relation to the mission of our active force, I am reminded again and again—sometimes quite starkly—that the world is still a dangerous place. As actions in the Middle East over the past few months have shown, our active and reserve Sailors put themselves at risk every day in support of national policy objectives. The unsettling events around the world clearly illustrate the need to maintain well equipped, trained, and ready Armed Forces. But that capability does not come cheaply.

Naval Reserve Sailors are on difficult assignments—and on the front lines—in some of the most hazardous areas where our Navy operates. In the last year alone, we have responded to the call to service by providing more than 2.5 million mandays of assistance to the fleet. In response to three concurrent Presidential Reserve Call-ups and to other crisis response operations, we are at work today in flash-point regions such as the Balkans and the Arabian Gulf.

In supporting counter-narcotics operations around the world, for example, Naval Reservists over the past year contributed 54 percent of all the Navy's days spent underway and 41 percent of all naval flight hours flown in support of the War on Drugs. Although our authorized end strength has dropped to 88,900 Full-Time Support and Selected Reservists from a high of 152,789 in 1990, we are fully employed and are conducting daily fleet support operations around the world. There is no shortage of work for Naval Reservists in their units or in the Fleet.

Without Naval Air Reserve squadrons, Naval Surface Reserve Force guided missile frigates, mine hunters and mine countermeasures ships, or the dedicated augment units and staffs that constitute the Naval Reserve, the active Navy simply could not accomplish its missions. Fleet exercises could not take place without Naval

Reservists. Routine logistics support of forces deployed around the world would be impossible without Naval Reservists. Sustained peacekeeping missions could not be conducted without Naval Reservists.

Fortunately, where our skills are required by the fleet for exigencies, the Reserve Force today is better equipped and more dedicated than at any time in the past. A substantial portion of certain critical missions can only be accomplished by Naval Reserve surface and air assets. Here are just a few of the areas where the Naval Reserve has become virtually indispensable: 100 percent of the Navy's organic airlift capability; 100 percent of adversary support flight hours, which simulate enemy aircraft for aviators preparing for deployment; 100 percent of Inshore Undersea Warfare assets; 99 percent of all Naval Control of Shipping assets; 93 percent of all Cargo Handling assets; and 60 percent of all Navy Construction Battalion forces.

Today's Naval Reserve Sailors maintain full-time operational missions, serving seamlessly alongside active forces in such specialty areas as intelligence, special warfare, public affairs, medicine and dentistry. They operate fleet hospitals, aviation squadrons and mine warfare forces.

By any standard, you will find that the Naval Reserve provides this country with unsurpassed value. Our authorized 88,900 Full-Time Support and Selected Reservists represent about 20 percent of the Navy's total personnel strength at a marginal cost of only 6 percent of the Navy's total operating budget. We say it over and over again, but it bears repeating: the Naval Reserve is an astonishing bargain at only six percent of the Navy's operating budget.

TOP FIVE PRIORITIES

A few months ago, I had the pleasure of briefing my top five priorities to our new CNO, Admiral Vern Clark. For this fiscal year, I have set the following priorities: Manpower, Training, Equipment Compatibility, Force Shaping and Fleet Support. If we are able to execute our plan in these areas, we will make significant progress in continuing the Naval Reserve as a world-class organization. Let me explain a little about some of our initiatives.

Manpower

I have stated many times that no matter what else we do well, it won't matter unless we can recruit and retain a well-trained career force. This is key to our success. It is why we are offering bonuses for reenlistment and extension; a Montgomery GI Bill kicker increase of $200 per month for undermanned ratings; a program to allow conversions to undermanned ratings; and other benefits such as space-available flights.

We are taking steps to ensure that our Sailors have the highest quality workplace environment, that they are recognized and rewarded for their work, and that they have input into improving their work lives and running our force more efficiently and effectively.

Clearly, recruiting remains a constant priority in an economy with a record low unemployment rate, and where the perception is that the active military force—and, by extension, the Reserve Force—is shrinking. The fact is that the Naval Reserve offers career-building jobs with extraordinary benefits to qualified people. Our challenge is to identify them, introduce them to the opportunities we offer, and sign them up.

To do so, we have added 90 more Reserve recruiters; detailed 30 enlisted personnel into two-year recruiting billets; tripled our advertising budget to $8 million annually; individually contacted service members scheduled to leave active duty; built ties between active and reserve recruiters; and better defined the career progression for reserve recruiters. In addition, we are planning to add a new non-prior service program that targets medical and Seabee skills.

Training

There are Naval Reservists drilling in every state in the nation. Some are close to their gaining commands and Naval facilities, but a large number are not. It is vitally important that we provide realistic training that meets the Navy's needs, whether our units are in Norfolk or Indiana. To that end, we've been able to increase funding to provide for unit travel, and we've added special funding for schools. There are some promising developments in the works using new technologies, but we need to continue to think innovatively to conduct more practical training. Forcing a Reservist to sit in a classroom for 16 hours a weekend is forcing them out of the Naval Reserve.

Equipment Compatibility

To ensure that our Reserve Force equipment is interoperable with the active force, we have begun replacing and upgrading Naval Reserve air assets, and are working to set in motion substantial upgrades to our IT systems.

On the air side, that means replacing our aging fleet of C–9 Skytrains. In April, the first C–40A Clipper was delivered and three additional C–40A's will be delivered by August of this year. The new Clipper will allow us to continue our mission of providing 100 percent of the Navy's worldwide intra-theater medium airlift in support of the Fleet, while at the same time ensuring the safety of our number one resource and most valued asset, "our people". The C–40A delivery begins the process of increasing safety, improving capability and meeting environmental requirements. Our goal is to replace all 27 of our aged C–9 aircraft.

Two of four of our F/A–18 Hornet aircraft squadrons will benefit from the purchase of 28 upgrade kits that will improve radar systems, armament controls, weapons station wiring and cockpit indicators. We are pursuing funding to purchase additional kits for our F/A–18 aircraft.

Information technology affords us new possibilities for improving efficiencies. For example, we are embarked on IT upgrades that will streamline the process of getting the right Sailor to the right place at the right time, every time. Under the New Order Writing (NOW) system that we're working on, applications for active duty will become much more automated and approved by the local command, which will generate orders and travel itineraries within a much shorter period of time. Similarly, travel expense vouchers would be submitted electronically, resulting in rapid payment of claims to our Reservists.

Correcting deficiencies in the existing IT systems, built on 1980s technology, has absorbed one-third of the Naval Reserve discretionary funding in the past year. We are building a unified information technology system that will eliminate existing barriers to Fleet support, and which is essential to the Navy Marine Corps Intranet (NMCI). We are a key player in NMCI and are working with the active forces so that NMCI can meet our unique needs.

Force Shaping

The Naval Reserve is working closely with Fleet manpower personnel to better shape the Reserve Force to meet Fleet requirements. Force shaping tools include the use of bonuses, targeted recruiting and retention efforts, and programs to transition Sailors from overmanned to undermanned ratings. Reservists are being matched to specific job requirements, and this allows the Navy to determine, at any given time, specific skill requirements and where Reserve personnel are most needed.

In late 1998, we introduced into the Naval Reserve a continuous improvement initiative. Drawn from industry and academia, it is based on a concept called "Leading Change," and is built around time-tested procedures for improving the effectiveness of large organizations. For two years now, my Executive Steering Committee has been hard at work on this undertaking.

"Leading Change" is profound in its scope. It involves nothing less than the systematic analysis of, and structured improvements in, the Naval Reserve's fundamental ways of doing business. The road has been long, but we have charted a course with distinct and measurable goals, in the context of a clear vision for tomorrow's Naval Reserve. The result will be a Naval Reserve much more responsive to the needs of both the Reservists and the Fleet. We are well on the way toward achieving that goal.

Fleet Support

The Naval Reserve contributed nearly 2.1 million man-days in support of national defense during fiscal year 2000. More than 2,000 Reservists participated in fleet exercises outside the continental United States while 1,100 Naval Reservists participated in exercises stateside. Operationally, Naval Reservists 37,239 workdays of contributory support to Fleet Air Mediterranean alone. Naval Reserve air assets flew in support of Operation NORTHERN and SOUTHERN WATCH, participated in counter drug operations in the Caribbean theater, and supported Navy's aircraft carrier deployments. In addition to providing Navy's entire air adversary training, the Naval Reserve provides 100 percent of Navy's intra-theater logistics lift.

Throughout the year the Naval Reserve safely airlifted more than 4.8 million pounds of cargo and 2,635 passengers in direct support of carrier battle group (CVBG), amphibious ready group (ARG), and other naval and allied units in the Mediterranean and Southwest Asia. Additionally, Reservists filled key billets on the Commander Fleet Air, Mediterranean (COMFAIRMED) staff in functions ranging from watch standing to deputy commander. At any given time, Reservists are performing annual training around the globe in such places as Korea, Japan, Italy and

Spain in support of Navy current operations. Notably, following the bombing of the U.S.S. *Cole*, a Reserve C–20 and C–9 responded immediately to airlift Navy divers and a Naval Criminal Investigative Service team to Yemen to assist in recovery and port security operations. In addition, Navy Coastal Warfare (NCW) Group 2 Reservists were recalled to active duty at the request of Commander in Chief, Central Command (USINCCENT) for ongoing force protection operations on the Persian Gulf. In some ways, the Naval Reserve is in an enviable position: the active duty Navy has an increasing need, and appetite, for Reserve skills. Many Reservists possess skills gained in the civilian workforce for which there is no direct occupation counterpart in the Active forces. For fiscal year 2001, Congress added $13 million to Active Duty Training for Fleet Support and $23 million for Annual Training, allowing for increased levels of assistance.

AN ENVIABLE FORCE

The Naval Surface Reserve and the Naval Air Reserve forces deploy assets that would be the envy of many individual nations.

Let's take a look first at the Surface Naval Reserve Force, which includes many commissioned and augment units. The ship assets are as follows: 8 Perry-class Guided Missile Frigates; 1 Newport-class Tank Landing ship; 1 Mine Countermeasures Command, Control and Support ship (U.S.S. *Inchon*); 5 Avenger-Class Mine Countermeasures ships; and 10 Osprey-class Coastal Minehunter ships.

Other Surface Naval Reserve resources include many other essential specialties, such as mine warfare forces; explosive ordnance disposal mobile units; expeditionary logistics support; cargo handling battalions; construction battalions; joint and unified command staffs; Fleet training teams; allied commands and staffs; mobile inshore undersea warfare; Merchant Marine; medical; dental; fleet hospitals; public affairs; special warfare; legal; and special boat units. It's an extraordinarily impressive list of professional warriors and support personnel!

The Naval Air Reserve Force operates some of the most sophisticated aircraft anywhere, including numerous commissioned and augment units. The Naval Air Reserve aircraft inventory as of April 1, 2001 consists of the following:

—27 high-speed, medium-lift transport aircraft: the C–9 Skytrains, (being replaced by the C–40A Clipper)
—18 C–130 Hercules transport aircraft
—6 C–20 Gulfstream long-range, high-speed, medium-lift transport aircraft
—6 C–12 King Air, light, twin-engine, turbine-driven aircraft
—4 EA–6B Prowlers used for tactical electronic warfare
—8 E–2C Hawkeye early warning radar aircraft
—22 F–5 Tigers, used for air-to-air adversary training
—48 F/A–18 Hornets, for interdiction, adversary, close air support and air combat
—16 HH–60H Seahawk helicopters used for combat search and rescue
—8 MH–53E Super Dragon mine countermeasures helicopters
—8 UH3H Sea King logistics helicopters (being replaced by the CH–60 Knighthawk)
—48 P–3C Orion land-based maritime patrol aircraft
—5 SH–2G Super Seasprite ASW helicopters (being replaced by the SH–60B Seahawk ASW helicopter)
—8 SH–60B/F Seahawk ASW helicopters.

Other Naval Air Reserve assets include a range of specialty units, such as fleet logistics support; fleet information warfare; strike warfare; airborne countermeasures; combat search and rescue; intelligence and cryptology; mobile maintenance facilities; audio visual and combat camera documentation; tactical support; mobile operations control; carrier group and air wing staff augment units; naval meteorology and oceanography; tactical air control and squadron augmentation units.

It's easy to see how the Fleet becomes dependent on its Reserve Force when our men and women represent such a diversified array of professional talent who seamlessly blend into our active forces.

FISCAL YEAR 2001 FUNDING OUTLOOK IMPROVED

Our operations, maintenance and personnel funding levels for fiscal year 2001 are much improved, thanks to Navy support and Congressional adds. As a result, we have increased the number of days of overseas Annual Training and Special Training for Fleet support, and added more funding for attending professional development schools.

A small policy initiative also helps us honor those who sailed before us. As our retired shipmates and World War II veterans pass away, Naval Reservists, as the Navy's representatives in thousands of communities, increasingly have been called

upon to assist in providing funeral honors. It is gratifying that we have received additional funding to support such a noble cause.

CONCLUSION

Our new CNO, who was once a Naval Reservist himself, has first-hand knowledge of the importance of maintaining a strong Navy and Naval Reserve. As Admiral Clark remarked at the beginning of his tenure in July: "The way ahead involves focusing on the Fleet; organizational speed and agility; commitment to our proven strengths and values; and commitment to our people as the Navy's most important resource."

We underscore what the CNO says about our One Navy team:

"In a nutshell, this is who we are: credible, combat-ready, forward-deployed naval forces, manned by well-trained Sailors motivated by a sense of mission and a desire to serve, committed to their Navy as their Navy is committed to them. We sail anytime, anywhere as powerful representatives of American sovereignty."

Every member of the Reserve Force—our Selected Reserve, our Ready Reserve and our Retired Reserve personnel, more than 700,000 in all—takes pride in our assignments, and in the opportunity to serve. Today's Naval Reserve Force is sought after and relied upon by the Fleet, yet still dynamic enough to be constantly re-evaluating itself for more productive and more efficient service in the future.

At the beginning of a new decade, and a new national administration, every Reservist should take stock of what we are: a cost-effective organization of mission-ready men and women. Our hallmark words: We are ready when called!

Senator STEVENS. Thank you very much, Admiral. We have been joined by Senator Cochran. Senator, do you have an opening statement?

Senator COCHRAN. Thank you. I am glad to be here with you today to thank those who are appearing to testify before our committee for the good work they are doing. I know their budgets are tight and they are being asked to do more and more to share the responsibility for keeping peace in the world and also maintaining security of our United States.

We are grateful to you for your continued work in that regard, both the Reserves and the National Guard, and it is good to have the component heads here today all together to talk about your funding needs for the next fiscal year. I want to be sure we have the money in our bill that will support what you need to do your job. That is what the purpose of the hearing is today.

Thank you very much, Mr. Chairman.

Senator STEVENS. Senator Feinstein, do you have any comments?

Senator FEINSTEIN. Thanks, Mr. Chairman, no. I will await questions. Thank you.

Senator STEVENS. Thank you very much.

Major General McCarthy.

STATEMENT OF MAJOR GENERAL DENNIS M. McCARTHY, DIRECTOR, RESERVE AFFAIRS DIVISION, U.S. MARINE CORPS RESERVE, DEPARTMENT OF THE NAVY

General MCCARTHY. Mr. Chairman, members of the committee, it is my privilege to report to you on the status and future direction of your Marine Corps Reserve, and to thank you for your support as a real contributor to our total force. I appreciate very much the opportunity and the honor to do that.

WAR-FIGHTING CAPABILITIES

The foundation of the Marine Corps is its war-fighting capability. Whether the war-fighter's mission is to seize the high ground, secure the beach, maintain air superiority, or provide humanitarian

relief, the Marine Corps active and Reserve components routinely join forces to accomplish whatever missions are assigned.

The value of the Marine Corps Reserve is measured in our ability to effectively augment and reinforce the active component, regardless of scenario, geography, or time frame. If we are to sustain the Marine Corps Reserve's war-fighting capability, we need the resources to maintain a high level of operational readiness.

The Marine Corps readiness is a primary concern. Our Reserves, like the active forces, needs adequate skills training, professional military education, administrative support, and well-deserved benefits. The challenge we now face lies in recruiting and retaining a dedicated, talented pool of Marines who will commit to both the present world operational tempo and be prepared for whatever the future may hold.

To meet this challenge, the Marine Corps, both active and Reserve, is focusing on four pillars of readiness. First, the Marine Corps values its Reserve Marines and their families, and we must develop family-oriented programs that will enable us to meet our recruiting goals and to enhance our retention. Equitable pay and benefits reward the Corps' most precious asset, our Marines.

LEGACY WEAPONS SYSTEMS

Second, the Marine Corps must find ways to maintain and upgrade Legacy weapons systems, and to adequately budget for the associated operational cost The operating cost of our aircraft are increasing, and some require upgrades to meet today's requirements. Adequate funding ensures crew performance, unit morale, and most importantly, mission readiness.

Third, we are experiencing higher operational and maintenance cost at our training facilities around the country, yet that infrastructure cannot afford any more downsizing. Inadequate and environmentally outdated training facilities make the job of recruiting and retaining dedicated Marines even more difficult. Inadequate training facilities jeopardize mobilization, readiness training, and mission readiness.

Finally, the Marine Corps' effort to replace aging systems and equipment is an ongoing process. We must find ways to modernize our inventories and budget accordingly without jeopardizing current mission readiness. Timely modernization will ensure our capability to continue to defend national interest.

Keeping the right number of Marines is vital to the total force concept, and to the unwavering relationship between the active and Reserve forces. The foundation of the Marine Corps will be preserved if we recruit and retain talented and dedicated Marines. When you look at the Marine Corps Reserve, you see the Marine Corps, because our blueprint for the future is the same.

PREPARED STATEMENT

Thank you very much, and I look forward to responding to any questions that the committee may have.

Senator STEVENS. Thank you, General.

[The statement follows:]

PREPARED STATEMENT OF MAJOR GENERAL DENNIS M. MCCARTHY

Senator Stevens, Senator Inouye, and distinguished members of the Committee, it is my privilege to report on the status and future direction of your Marine Corps Reserve as a contributor to the Total Force. On behalf of Marines and their families, I want to thank the Committee for its continued support. Your efforts reveal not only a commitment to ensuring the common defense, but also a genuine concern for the welfare of our Marines and their families.

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 Active Component, performing a variety of missions including providing civil affairs expertise in the Balkans, aviation support in Southwest Asia, and logistics support in Central America. Reserve Marines and units participated in a variety of exercises in locales as distant and varied as Germany, Romania, Egypt, Macedonia, Korea, Thailand, and Australia. To quantify this effort, Marine Forces Reserve (MARFORRES) deployed approximately 3,200 Marines and 1,200 Short Tons of equipment, via strategic lift, to support our National Military strategy during fiscal year 2000. Force deployments during the first two quarters of fiscal year 2001 show the same level of effort.

Marine Reserve units and individuals participated in at least 75 percent of the counternarcotics missions assigned to the Marine Corps in fiscal year 2000. In the United States, they trained to maintain readiness for mobilization, and conducted community service projects in their hometowns, thereby strengthening the link between the military and our society. We continue our contribution to Marine Corps operational planning as we review and implement even more options for greater premobilization Reserve integration with active units.

My intent today is to quantify the state of the Marine Corps Reserve with respect to the Corps' Four Pillars of Readiness: Marines and their families, legacy systems, infrastructure, and modernization. During my comments today, I will discuss the status of many programs. I should note, however, that the programs I will discuss, and the associated funding levels may change as a result of the Secretary of Defense's strategy review that will guide future decisions on military spending. I ask that you consider my comments in that light.

Overall, our budget has been barely adequate to sustain the readiness of our Marines. We have been maintaining readiness at the expense of modernization and maintenance of our infrastructure. Recent spikes in the cost of utilities have put even this fragile balance in jeopardy.

MARINES AND THEIR FAMILIES

The Marine Corps role as we enter the new millennium demands that the Marine Corps Reserve be a ready, willing, and able contributor to the Marine Corps' Total Force effort. Reserve Manpower Augmentation is required in order to meet the Reserve commitment as a capable, ready partner in America's force in readiness. Reserve manpower augmentation consists of ADSW and a reassessment of the remaining Quadrennial Defense Review (QDR) reductions in the Marine Corps Reserve. The Marine Corps Reserve is no longer only a force for mobilization for Major Theater War but is now a daily use force. We are using the Reserve for manpower augmentation to Active and Reserve staffs, units, and exercise forces with short-term, fulltime personnel to plan and perform training, administration, maintenance and logistical support not otherwise available through existing manpower levels or traditional Reserve participation (drills and annual training). These additional personnel are also of absolute necessity in maintaining our ability to plan and participate in operational tempo (OPTEMPO) relief operations, Joint and Combined Exercises, and essential combat, combat support, and combat service support training. MARFORRES has traditionally provided 150,000 workdays per year in support of the Active Component—we doubled that to well over 300,000 in fiscal year 2000. Our expanded measures for OPTEMPO relief, including the two important actions of recurring security deployments to Guantanamo Bay and the assumption of the (United American States (UNITAS) deployment to South America in alternating years, contribute to ADSW requirements outpacing available resources.

The second issue affecting the first pillar of readiness is the QDR. Although the last QDR initially led to tangible improvements, it also resulted in a reduction in our end strength that essentially removed the flexibility in meeting the personnel demands inherent in a robust operational tempo. One of the major factors facilitating Reserve readiness is the significant investment of active duty manpower in full time support of the Reserve. The QDR directed reductions of active duty support of the Marine Corps Reserve, particularly the Active Reserve program, are challenging our ability to maintain readiness and meet requirements for Reserve em-

ployment. Eighty-one percent of the QDR Reserve reductions will have been taken by the end of fiscal year 2001 but any further reductions would negatively impact our ability to provide OPTEMPO relief and maintain Reserve readiness.

Internal Marine Corps reviews, including the Fiscal Year 1999 Force Structure Planning Group and Fiscal Year 2000 General Officers Future Group determined that the 1997 QDR Reserve reductions require a minor adjustment. An adjustment would stem the degradation of the Marine Corps Reserve's capability to provide OPTEMPO and PERSTEMPO relief to Active Marine Forces, maintain sufficient Full Time Support at our small unit sites, and retain critical aviation and ground equipment maintenance capabilities. Our plan calls for maintaining overall Selected Marine Corps Reserve (SMCR) end-strength at 39,558 (including 2,261 Active Reserves) through fiscal year 2003.

The most sacred honor we can provide veterans is that of a military funeral. The active duty staff members and Reserve Marines at our 185 manned sites performed approximately 5,500 funerals last year, a 45 percent increase over 1999. We project a 39–40 percent increase per year giving us potentially 7,500 funerals to support this year. The steps that Congress took last year to allow Reserve participation at the inactive duty drill rate for funeral honors duty have helped us meet this growing obligation. Our current Reserve end strength supports funeral honors at our small sites (where there are less than 10 active duty Marines on staff), not as a primary duty, but as one of the many tasks incident to training and administering the Reserve and providing a military connection to the local community. As a result, we have realized increased operations and maintenance costs associated with vehicle maintenance and fuel for transportation of funeral honors parties and for the cleaning and maintenance of dress uniforms. Continued support for military funeral honors funding, in our Military Personnel and Operations and Maintenance accounts, is critical to ensuring mission success in this most worthwhile endeavor.

Recruiting and retaining quality men and women in the Marine Corps Reserve continues to be a challenge in today's competitive environment. The economy has been strong and young people are presented with numerous alternatives to military service. Our mission is to find those who choose to manage a commitment to family, community, a full time job, and the Corps. While such dedication requires self-discipline and personal sacrifices which cannot be justified by a drill paycheck alone, adequate compensation and retirement incentives are an element of attracting and retaining quality personnel.

Because many of our Reserve Marines serve first in the Active component, we continue to man transitional recruiting stations at Marine Corps bases and stations to begin the prior service recruiting process before Marines leave active duty. I appreciate the Congressional support for the increased educational benefits and reenlistment and affiliation bonuses that help us attract these Marines to join and stay in our units. The transitional recruiters are also the portal of entry for a program of high value to the Commandant, "Marine for Life."

The Marine For Life Program is being developed to achieve the Commandant's vision of "improving assistance for our almost 27,000 Marines each year who honorably leave active service and return to civilian life, while reemphasizing the value of an honorable discharge." The Marine For Life Program will enhance current assistance by providing valuable sponsorship to these Marines as they transition to civilian life. The Marine for Life Program will build, develop, and nurture a nationwide network of transitioning Marines, veterans, retirees, Marine Corps affiliated organizations, and friends of the Corps. The program will foster a mutually supportive life-long relationship between the Marine, his/her Corps, and the public that we serve, thereby strengthening our ethos of "Once A Marine, Always A Marine."

During the past fiscal year we achieved 103.4 percent of our goal for prior service and 102.5 percent for non-prior service Marines. It was not easy. Our retention rates for Reserve enlisted Marines staying beyond their initial obligation are also improving. We do, however, still have some work to do in keeping non-prior service Reserve Marines satisfactorily participating for the full length of their obligated drilling commitment. The incentives provided by Congress, such as the Montgomery G.I. Bill (MGIB), the G.I. Bill Kicker (Kicker), enlistment bonuses, medical and dental benefits, and commissary and PX privileges, have all contributed to the stability of our Force. These incentives have helped us find and retain capable, motivated, and dedicated Marines. Continued Congressional support of these programs is critical to attracting and retaining the high-quality individuals our Corps needs for the future.

The MGIB and Kicker, which can provide up to $600 per month for college, is the most popular incentive we provide to Marines but it must compete with the National Guard's enticement of a full paid scholarship to a state run college or university. I appreciate the additional MGIB funding the Congress provided in fiscal year

2001. It expanded our ability to offer the Kicker to more Marines in critical billets and helped to level the field of competition between the Guard and the Reserve Component.

Our Career Management Team (CMT) continues to expand its efforts to support "Career Reservists"—those Marine officers and enlisted who have completed their initial obligation and remain affiliated. The CMT staff is available to provide record reviews and counseling, career guidance, and promotion information to assist and guide Reserve Marines in making the best possible career decisions. Via the CMT website, Marines can access CMT services as well as find and apply for open Reserve billets and Active Duty Special Work (ADSW) opportunities using the Reserve Career Management Support System (RCMSS) database. RCMSS also allows units and the CMT staff to contact Marines qualified for a particular job, and provides units visibility of Marines who are actively seeking Reserve career options.

Our benchmark for achieving our goals is simple—"One Corps, One Standard" for all Marines, Active and Reserve. The Marine Corps Total Force System (MCTFS), our single integrated personnel and pay system, encompasses the records of all Marines in a single logical database. To meet the unique requirements of the Reserve, we are constructing MCTFS compatible automated systems to reduce costs and provide better service to our Marines. An example is the Marine Corps Medical Entitlements Data System (MCMEDS) that automated injury claims processing for Reserve Marines, reducing paperwork and facilitating rapid determination of entitlements for the injured Marine. We will shortly field our Reserve Order Writing System (ROWS) to integrate our orders request and writing systems, facilitate reconciliation of funding obligations, and ultimately interface with MCTFS and the Defense Travel System. It will expedite orders and travel processing, and smooth the Marine's transition to active duty, guaranteeing timely orders and pay actions. We actively participate in development of the Total Force Administration System (TFAS), a Marine Corps program to update and further automate our Manpower Management System.

The U.S. Navy medical, dental, religious, and naval gunfire support furnished to MARFORRES also contributes to our personnel readiness. There is a requirement for over 2,700 Naval Reserve officer and enlisted personnel to support MARFORRES. I enthusiastically support the Navy plan to fund a full 15 day annual training for these sailors in fiscal year 2002 and out. Their training alongside the Marines that they support is essential to the successful accomplishment of our training and operational mission. The Navy also provides near total manning for two Status of Resources and Training System (SORTS) reportable Marine Corps commands, the Medical and Dental Battalions of the 4th Force Service Support Group, as well as significant support of air/ground combat elements. I will work with the Director, Naval Reserve to maintain a minimum of C2 readiness.

LEGACY SYSTEMS

Our second pillar of readiness, legacy systems, represents the equipment we will fight with today—our near term readiness. These systems are currently ready due to the hard work of our Marines and the assistance of Congress in providing additional resources for maintenance and spare parts. The cost, however, of keeping this equipment ready continues to climb. In a constrained environment, maintaining the readiness of aging equipment competes with monies that would otherwise be spent on modernization. While we must maintain our equipment, we cannot afford to continue to do it at the expense of modernizing the force.

Maintaining our aging equipment continues to challenge the Force. Even though the Marine Corps is replacing some equipment and modernizing others through extensive modifications, these initiatives will take a few years to complete. Since the Reserve generally receives new equipment and modifications to existing systems after the Active force, the equipment we currently possess will continue to age and require more frequent repairs. Lengthy repair cycle times greatly reduce the amount of time that reservists have for annual training. Time is a valuable commodity that is extremely limited in the reserve environment. The more burdensome these repairs become to our units, the more the quality of training will diminish.

To maintain current levels of readiness, we must have sufficient operations and maintenance funding for corrective and preventive maintenance programs. Due to topline constraints, the existing depot maintenance backlog for MARFORRES equipment is growing. Corrosion control funding is, as always, a high priority to all Marine Corps units. Current funding provides relief, but the pending requirement for corrosion control repairs to equipment located at our home training centers remains a challenge. The aging of our equipment plays a major role in this area. We are outsourcing and competitively bidding some of our intermediate maintenance requirements as an innovative way to stretch the maintenance dollar. Two success

stories are UNICOR Federal Prison Industries and the Anniston Army Depot, both of which provide competitive costs and a timely turnaround of a quality product."

We are experiencing higher maintenance costs for our heavy and medium mechanized weapons systems—M1A1 Tanks, Assault Amphibious Vehicles (AAVs), and Light Armored Vehicles (LAVs). Our 135 LAVs particularly have experienced high operational tempo and a consequent increase in maintenance requirements. We are procuring dehumidification systems to prevent the detrimental effects of moisture intrusion on the sophisticated electrical and optical components of these ordnance vehicles. Nonetheless, a shortfall in maintenance funding continues to exist.

Our aviation equipment is facing a similar situation. With the exception of our KC–130Ts and CH–53E aircraft, many of our aircraft are approaching block obsolescence. Our CH–46E averages over thirty years old—some of our younger pilots are flying the exact same aircraft that their fathers flew. Continued aviation modernization is a critical path to future readiness.

While on the subject of aviation, I would like to discuss our Flying Hour Program. In fiscal year 2000 MARFORRES executed 100 percent of the programmed funding while flying 92 percent of the programmed hours. If we execute our current fiscal year 2001 Flying Hour Program without additional funds—either an increase to topline or through reprogramming—our squadrons will not have enough funding to achieve the desired Primary Mission Readiness. There will also be a decrease in Mission Capable/Full Mission Capable rates and a potential 6–8 month recovery time for the re-qualification of aircrews. The prospect for such a stand down is a major readiness concern.

Until the gap between the cost of our aging ground equipment and aviation fleet and the requirement for modernization is addressed with additional resources, we will continue to realize exponential increases in the levels and frequency of maintenance necessary to achieve acceptable levels of equipment readiness. Meeting these requirements is critical. In most cases the Reserve will operate its legacy systems longer than the Active Component.

INFRASTRUCTURE

Investment in infrastructure has been a bill-payer for near-term readiness for eight of the last ten years. Maintaining and modernizing our training center infrastructure has become extremely challenging. Under current construction plans, the 24 sites owned outright by MARFORRES are on a schedule to be replaced once every 100 years. Our costs for facilities operations and maintenance have increased 20 percent in less than 3 years. This fiscal year we are experiencing unusually high utilities costs, both at sites we own and those where we must reimburse a host. In November 2000 we were alerted that our electricity and natural gas costs at our facilities on Marine Corps Base Camp Pendleton would increase by 87 percent and 60 percent, respectively. These increases, in conjunction with current maintenance and repair of real property projects of more than $21.6 million, exceed the annual resources programmed for training. Rising infrastructure costs, largely beyond our control, challenge our finite resources.

MODERNIZATION

MARFORRES' top modernization priority is to upgrade our fleet of 48 F/A–18A aircraft (4 Squadrons) with Engineering Change Proposal (ECP)–583. While our Marines and their F/A–18A's performed superbly last year in the Bright Star exercise, these are the same type aircraft that could not be employed in support of Kosovo operations due to the lack of self-designating capability. ECP–583 is a hardware and software upgrade designed to make the current aircraft compatible both operationally and logistically with other F/A–18C/D models utilized in theater by CinCs or Marine Air Ground Task Force Commanders. This upgrade provides the capability to self-designate precision munitions, to employ the newest generation of air-to-ground/air-to-air weapons, and to conduct night operations. Although billed as a modernization program, ECP–583 is also a readiness and sustainment issue linked directly to the roles and missions these squadrons uphold in the Total Force. This Total Force program also includes 28 Active Component aircraft for a total of 76. The modernization of these F/A–18A's will make these Active and Reserve aircraft capable, relevant, and fully interoperable in support of the Total Force Marine Corps. Current funding will upgrade 22 active and 22 reserve aircraft to full ECP–583 standards, while 32 aircraft await funding for their upgrades.

Our second modernization priority is upgrading the remaining 11 of our 21 CH–53E helicopters with the helicopter night vision system (HNVS). The HNVS improves the capability to navigate and operate at night and during periods of reduced visibility and supports the full operational and logistical integration of Reserve

forces with Active forces. Another top priority is the KC–130T Avionics modernization/standardization which closely parallels the USAF C–130 modernization effort. The current Reserve aircraft configuration is not compliant with emerging Communication, Navigation, and Surveillance/Air Traffic Management or mandated Navigation/Safety requirements. Funding these and other modernization initiatives to maintain readiness and safety will facilitate the effective integration of Reserve aviation assets with the Active Component.

While fixed and rotary wing aviation modernization are the most pressing needs of the Marine Corps Reserve, they must not eclipse vital ground combat and logistics modernization that will ensure the Reserve remains an effective combined arms team. The Marine Corps commitment to Reserve modernization to expand Total Force capability is demonstrated by our plans to field the High Mobility Artillery Rocket System (HIMARS) to the Reserve to provide all weather fire support for major theater war. As currently planned, the fielding of the Medium Tactical Vehicle Replacement (MTVR) and the HMMWVA2 to the Marine Corps Reserve is scheduled to be completed by 2004 and 2005, respectively. These assets will materially increase the readiness posture of the MARFORRES. We are continuing to work with Headquarters Marine Corps and the Marine Corps Materiel Command to develop optimum Total Force fielding plans for new equipment.

The Marine Corps Strategy 21 reaffirmed that Reserve Integration Expertise is a core competency of the Marine Corps. Ready, rapidly responsive Marine Reserve forces are a vital part of the Marine Corps and provide depth, flexibility, and sustainment. Modernization of our Reserve force should parallel the modernization of our Active force if we are to ensure our Total Force is ready, when called upon, to fight and win tomorrow's battles. Modernization of equipment, along with investment in infrastructure has been a bill-payer for near-term readiness for eight of the last ten years. We must reverse this trend and invest appropriately in these critical areas.

FUTURE ROLES AND MISSIONS

The value of the Marine Corps Reserve has always been measured in our ability to seamlessly and effectively augment and reinforce the Active Component. All operational units of the Selected Marine Corps Reserve have been assigned to a unified combatant commander and apportioned to the CINCs for war planning and are, in fact, included in major theater war (MTW) plans. In the event of an MTW our Reserve commanders know: when and where they can expect to mobilize and deploy, what missions and tasks they will be expected to perform, and which Active Component commander will employ them in combat. Most Marine Reserve units are identified to deploy in the earliest phases of a conflict, to include units identified to fall in on Maritime Prepositioned Shipping equipment. These facts clearly demonstrate how important the Marine Corps Reserve is to the total Marine Corps MTW planning effort. Although our primary roles will not change, current global conditions will require increasing contributions from the Reserve to support Total Force demands as contributors to exercises, OPTEMPO relief, and actual operations.

Operational tempo relief missions will continue to provide increased opportunities for reservists to support the Total Force effort throughout the world. Requests for reserve support cross the spectrum of unit type and capabilities. This past year we supported contingency operations by providing a Civil Affairs detachment for Kosovo and KC–130 support for both Operation Northern Watch and for forward deployed Marine Expeditionary Units (MEUs), relieving Active component aviation units of the missions. Additionally, our Air Naval Gunfire Liaison Companies (ANGLICO) supported both east and west coast MEUs in exercises within the United States and overseas.

Outside of the Continental United States Reserve deployments in fiscal year 2001 are planned to support contingency operations, bilateral exchanges, and to provide OPTEMPO/PERSTEMPO relief to the active component. These units will conduct live-fire exercises and participate in amphibious, jungle, mountain, and cold weather training, which will enhance unit and individual skills, proficiency, and readiness. This Reserve participation includes: six New Horizons operations conducted in Central and South America, two Civil Affairs detachments to Kosovo for a six month rotation each, two Dutch bilateral exchanges in Curacao, an Australian exchange in support of Exercise Gold Eagle, and numerous Partnership for Peace Exercises in support of the European Command.

This year the Marine Corps Reserve is also supporting two additional OPTEMPO relief efforts. We have deployed a provisional security unit from the 23rd Marine Regiment to Guantanamo Bay, Cuba to serve a four-month deployment, relieving the Marine Corps Security Force Battalion of the requirement to send one of its

FAST platoons to perform that mission. We have been tasked to assume the Marine portion of the UNITAS exercise. The goal of this initiative is to assign the UNITAS deployment to the Reserve every other year. We will begin training a reinforced company from the 23rd Marine Regiment, this year, in preparation for the 2002 UNITAS deployment. A robust Special Training (ADSW) account is a critical element in meeting the requirements of the Total Force.

The Marine Corps Reserve at the beginning of the new millennium must be able to adapt to new missions in response to future challenges. The role played by our Reserve units in Weapons of Mass Destruction—Consequence Management (WMD–CM) will not detract from their primary mission of augmenting and reinforcing the Active Component. The Marine Corps Reserve, already "forward deployed" in cities across America, can play an important role in supporting civil-military responses to crises.

Given that we are to continue to increase the employment of the Reserve in support of Total Force missions, we must maintain current readiness while ensuring resources are available for modernization. Congressional support for increased use of the Reserve has been a key element in our Reserve Marines and Sailors providing OPTEMPO relief and training alongside their Active counterparts without impinging on other resources. Your support permits us to meet commitments that may go beyond the normal two week annual training period. While the historical Reserve mission to augment and reinforce our Active Component remains our focus, the demands of this and emerging missions will increase operational challenges and amplify the need to effectively resource the Marine Corps Reserve. With proper planning that takes into account the specific demographics of the Marine Corps Reserve, and with adequate resources, we can do more and still take care of our Marines. We are not yet approaching the limits on the use of the Marine Corps Reserve.

We are ready today, but our readiness has come at the expense of investment in our infrastructure, modernization, and quality of life accounts. We are ever mindful that it has been Congress' consistent, steadfast, and unfailing support that preserves our ability to answer the Nation's call. The Marine Corps appreciates your continued support and collaboration in making the Marine Corps and its Reserve the DOD model for Total Force integration and expeditionary capability.

Senator STEVENS. General Sherrard.

STATEMENT OF MAJOR GENERAL JAMES E. SHERRARD, III, CHIEF, AIR FORCE RESERVE AND COMMANDER, UNITED STATES AIR FORCE RESERVE COMMAND, DEPARTMENT OF THE AIR FORCE

General SHERRARD. Mr. Chairman, Senator Inouye, members of the committee, I am indeed proud to be representing nearly 74,000 men and women of the Air Force Reserve, as we have a chance today to discuss our challenges and some of our accomplishments with you today.

Our Air Force Reserve is strong and continuing to grow stronger, with your help. Particularly, I need to thank you for funding the pay raise above the employment cost index; for the additional recruiters you gave us last year for recruiting and retention; incentives you gave us which allowed us to have pilot bonuses for our Active Guard and Reserve (AGR) pilots; as well as provisions for the Montgomery GI bill kicker—additional dollars for our reservists.

EXPEDITIONARY AEROSPACE FORCE

Today, our citizen airmen are engaged in missions around the world, stepping up to the task with enthusiasm and expertise. We are an integral partner in the Expeditionary Aerospace Force of our Air Force. In cycle 1, which was recently completed, more than 14,000 members of the Air Force Reserve were participants. As we engage in cycle 2, we have more than 12,000 members either engaged or will be engaged prior to completion of the cycle.

We currently have more than 5,000 members deployed, both in the States and outside the Continental United States (OCONUS), with almost 1,300 of them being out of the country.

As we face the future, I am confident that it will be the people of the Air Force Reserve, working seamlessly with our friends in the Air National Guard and our active duty partners, to assure our continued success as we provide the world's most premier Aerospace Force.

Before I mention some of our challenges, I would like to discuss what I believe are some of the reasons we are so successful. First, our people are the best, and as has been mentioned by my colleagues, we are, in fact, a reflection of the active force that we support. This is so key, because they, too, are also the very best that we could ever hope to have in our military.

We have in our fold a sufficient number of prior service members, and their experience is invaluable. We have individual mobilization augmentees who bring very, very specialized skills, which is also essential to our success and our service. A pivotal factor to our success to date, is our organizational contract-management of reservists by reservists. The support for families, civilian employers, of the Air Force, and the Department of Defense (DOD), of communities and, most importantly, of Congress, are vital to our success and that has never wavered.

READINESS

We are a combat-ready force, ready for deployment, because we have one tier of readiness in the Air Force. Our readiness standards are, in fact, measured by the active force, while training is controlled by Reserve members. We train and deploy with our active force. We have comparable and interoperable weapons systems, and we believe that our force is ready, at any given moment, to extend our capabilities whatever the Air Force needs may be.

RECRUITING AND RETENTION

Our challenges include, as has been mentioned by my colleagues, recruiting and retention. Overall, our force remains at over 80 percent prior service, with high-quality recruits available. However, the active duty force drawdown is at an end, and so therefore we are looking at additional nonprior service members to fill our recruiting needs.

That pool of eligible service members for us to recruit is faced with a good economy. They appear to have a lesser propensity to serve, and have abundant opportunities both for college tuition assistance and things of that type, which make recruiting initiatives very, very important for us.

We need to have the ability to offer incentives which will help us enhance retention of those members beyond the minimum satisfactory years of service to achieve a Reserve retirement. It is essential that we keep them for the maximum period that we can, and budgeting for recruiting on retention incentives and advertising are a top priority. Resourcing additional recruiters, leased office space, and advertising are critical if we are going to have our message placed out in the public where, in fact, we can have the opportunity to address potential nonprior service individuals.

Additionally, resolution of follow-on missions for our C–141 unit-equipped organizations, completion of our KC–135E to R engine conversion programs, the rising cost of O&M with an aging fleet, modifications of aging equipment, and then providing facilities and infrastructure which meet the needs to enhance readiness in our training are all key challenges that we face and will continue to face. We must ensure that we have modernization initiatives which are compatible with the active programs to include new systems and upgrade of current systems.

PREPARED STATEMENT

I thank you for the opportunity to present our story today, and I look forward to answering any questions that you may have.

[The statement follows:]

PREPARED STATEMENT OF MAJOR GENERAL JAMES E. SHERRARD III

Mr. Chairman, Senator Inouye, and distinguished members of the Committee, I appreciate the opportunity to appear before you today. I would like to thank the Committee for your continuing support, which has helped your Air Force Reserve address vital recruiting, retention, modernization, and infrastructure needs. Your passage of last year's pay and quality of life initiatives were especially important as your actions sent an unmistakable message to our citizen airmen that their efforts are truly appreciated.

I am pleased to tell you that the Air Force Reserve continues to be a force of choice for the Air Force and the warfighting Commanders in Chiefs (CINCs), whenever an immediate and effective response is required to meet the challenges of today's world. We are ready in peace or war, available for quick response, and able to stay the course when called upon.

Air Force Reserve Command (AFRC) members are essential to nearly everything we do today, and we intend to do more. Our day-to-day involvement has increased markedly in recent years. The Air Force Reserve participated in 11 contingencies in the 37 years between 1953 and 1990, and in the last ten years we have played a significant role in more than 50 major operations. This is part of life in the Air Force Reserve and we are proud to do it. From the end of Desert Storm until the 1999 Presidential Recall for Operation ALLIED FORCE, and in every instance since, we have met these obligations with volunteers. The Air Force Reserve ethic of volunteerism is something we are very proud of, believing it reflects the quality and enthusiasm of our people.

People are our most important asset. In an effort to retain our best and brightest, we need to reward our people through compensation and promotion and ensure they know their efforts are appreciated. We need to look after their families while they are deployed and reach out to their employers with our thanks for their support. We need to ensure that there is open dialogue among the troops and from the troops to me to make sure that we're doing our job the best that it can be done. More than ever, we need to continue to partner with you to ensure we maintain the strongest air force in the world. In the Air Force Reserve, we put people first, emphasize readiness, and continue to seek balanced, time-phased modernization and infrastructure programs.

The Air Force is a team—we train together, work together, and fight together. Wherever you find the United States Air Force, at home or abroad, you will find the active and Reserve side-by-side. You can't tell us apart and that's the way it should be. The bottom line is that when the Air Force goes to war, enforces a peace agreement or undertakes prolonged humanitarian missions anywhere in the world today, the Air Force Reserve will be there. During my comments today, I will discuss the status of many programs. I should note, however, that the programs I will discuss, and the associated funding levels may change as a result of the Secretary of Defense's strategy review that will guide future decisions on military spending. I ask that you consider my comments in that light.

Fiscal year 1999 ended with a bang, as Hurricane Floyd plowed into the coast of North Carolina. As the flooding peaked, AFRC coordinated with Federal disaster response personnel to bring in five HH–60 helicopters from the 920th Rescue Wing at Patrick Air Force Base, Florida to initiate rescue operations. Over the next six

days, Reserve rescue crews worked day and night, flying 59 sorties and pulling 215 flood victims from rooftops, trees, cars, and isolated areas of high ground.

Another Reserve mission, Coronet Oak, faced a very difficult transition in 1999. Coronet Oak is an operation that provides C–130s from Air Force Reserve Command and the Air National Guard to U.S. Southern Command to provide airlift support in the Caribbean, and South and Central America. When America transferred the Canal Zone back to Panama in 1999, this long-established operation had to look for a new home. At first, only temporarily placed at Muniz Air National Guard Base in San Juan, Puerto Rico, it was decided to go ahead and make Muniz the permanent location for the operation. Far from ideal for a number of reasons, Muniz was still more cost effective than other locations because basic facilities were available that did not need a huge infusion of money to make them operable. Still, the year was full of growing pains as new logistics trails had to be developed, work-arounds had to be initiated for some of the facility limitations, and so on. The missions continued to flow without a break, though, and our crews flew countless sorties in support of counter-drug operations, embassy resupply, and a variety of airlift requirements.

HIGHLIGHTS OF 2000

It was another busy, productive, but challenging year for Air Force Reserve aircrews. Natural disaster responses, the relocation of a long-standing forward operating location, an election year surge in presidential and congressional airlift support, the growing pains of a new deployment concept, the taking on of new missions, the introduction of a new weapons capability—the Air Force Reserve was there. Through it all, our outstanding people met the challenges, found ways to succeed, and proved beyond doubt that the Air Force Reserve is an indispensable part of America's Total Force military.

Unfortunately, the heavy rains of 1999 also brought on a potential medical crisis caused by a super-heavy mosquito infestation. In these opening days of the new fiscal year, AFRC stepped to the forefront again with another of its specialized missions, aerial spray. The 910th Airlift Wing, Youngstown, Ohio is the only unit in the entire Air Force to provide this critical mission for disease suppression, natural disaster relief, oil spill dispersion, and invasive species management. In the aftermath of Hurricane Floyd, the 910th's specially equipped C–130s logged over 100 hours of flying time spraying 1.7 million acres in Virginia and North Carolina for mosquito control. Again, a superhuman effort by a small number of Reserve crews responding to the needs of their fellow countrymen.

Fiscal year 2000, also saw the worst forest fires in U.S. history. Within the Air Force Reserve, only one unit, the 302nd Airlift Wing at Peterson Air Force Base, Colorado, is trained to support the U.S. Forest Service's fire fighting efforts with the C–130 based Modular Airborne Fire Fighting System. Last year, the fires were so bad that the 302nd was called early in the season and stayed until rain showers in September finally brought some relief.

From the end of July to early September, 302nd crews flying two aircraft completed 154 sorties in California and Washington, dropping over 400,000 gallons of fire retardant. The crews logged as many as eight sorties per day, going back for load after load of retardant to attack critical points in front of the raging fires. Their efforts have continued to pay off long after the fires died out, as the retardant is also a fertilizer that promotes the rapid regrowth of the fire-charred terrain, helping to prevent erosion as the land comes back to life.

An ongoing mission the Reserve is involved with which has an impact on people's lives throughout the world is the transportation of humanitarian relief goods under the auspices of the Denton Amendment Program. This program allows DOD transportation assets to move humanitarian cargo for free on a space-available basis. In fiscal year 2000 the Air Force Reserve moved over 1.9 million pounds of Denton cargo, flying 122 missions. AFRC is the top supporter of the Denton program year after year. It provides good training opportunities for our airlift crews while enabling them to make a positive difference throughout the world.

Though the Expeditionary Aerospace Force (EAF) was a completely new concept for the Air Force, the Air Force Reserve's tradition of training to be a deployable force allowed a relatively seamless transition to the EAF and its force projection packages, the Aerospace Expeditionary Forces (AEFs). However, Reserve deployments in the past primarily involved aircrew members and maintenance support personnel, so it was an adjustment for some Expeditionary Combat Support (ECS) personnel such as security forces, civil engineering and services. The transition was not without its growing pains, but after the first few rotations, predictability and timeliness of requirements had vastly improved, transportation was much more effi-

cient, and working relationships between AFRC and the various active duty organizations involved in the AEF process had greatly matured.

Despite the initial challenges, AFRC's transition to AEF support must be considered a success by any measure. The command more than met its initial requirements in aviation operations, and support from the ECS side was notable regardless of the problems they faced. The exceptionally strong participation by AFRC security forces was outstanding, and greatly relieved the high deployment stress of their active duty brethren. Overall, more than 14,000 Reservists deployed in support of the AEFs by the end of cycle 1, a testament to the readiness, patriotism, and proud professionalism of the Air Force Reserve.

I would be remiss if I didn't mention the outstanding support from our more than 12,500 Individual Mobilization Augmentees (IMAs). Found in nearly every career field, IMAs augment active duty manning by filling wartime surge and national security requirements. Due to sustained high OPTEMPO, active component Air Force intelligence relies heavily upon ARC intelligence personnel to meet peacetime, surge and wartime requirements. This intelligence force provides approximately 40 percent of the overall Air Force intelligence capability. IMAs in Air Force Material Command performed more than 530 projects, ranging from humanitarian services to highly technical resolutions for major support challenges. As with all our reservists, IMAs continue to proudly and professionally meet the challenges of integrating seamless support.

RECRUITING AND RETENTION

While some progress has been made in recruiting and retention, my principal concern today remains attracting and retaining high quality people in an increasingly competitive economic environment. The additional recruiting funding we received last year was sincerely welcomed and we are grateful for your support. In spite of accessing nearly 9,500 personnel, which is our highest number of accessions since fiscal year 1995, we missed our recruiting goal by 14 percent in fiscal year 2000. However, our production recruiters continue to lead the Department of Defense in annual accessions per production recruiter with an average of over 38 accessions in fiscal year 2000. Equally important to Air Force Reserve Command's ability to meet the requirements being levied on us is family and employer support. Their sacrifice and continual support make it possible for our members to carry out their duties in such a spectacular manner.

Recruiting

Historically, the Air Force Reserve accession mix has been between 80–90 percent prior service, with 75 percent of those drawn from active duty Air Force. High prior service accession rates have contributed to making us one of the most experienced reserve forces in the world. Moreover, we have found that prior service personnel are more likely to be retained until the 20-year point or longer, making the force more stable. In the past, we recruited heavily from trained personnel leaving active duty during the force drawdown and we are currently accessing more than 21 percent of the active duty Air Force recruitable separatee market. However, the end of the active duty drawdown demands new recruiting strategies and expectations. By fiscal year 2001, active duty accessibles (those eligible to join the Air Force Reserve) equaled less than one-third of those who left active duty in the early 1990s. If we cannot maintain high accession levels in the prior service market, we'll be forced to increase our non-prior service (NPS) accessions to meet manning needs. As it is, NPS accessions required to meet our recruiting goal may soon quadruple, from less than 1,000 in the early to mid-90s to more than 4,000 in the outyears. As college enrollment and funding opportunities increase, the declining tendency to enlist in the military, a smaller prior service pool as well as the decrease in propensity to affiliate after leaving active service, our reserve recruiters will continue to find innovative ways to reach the NPS market.

Yet, we're making positive in-roads with the NPS market. We believe there are many outstanding young people across America who want to serve their country, but they prefer to do it from home and on a part-time basis. These are the people we are after, especially the ones who are attending college, either full or part-time. To help us attract these candidates and retain our current members, we profess the value of the Selected Reserve Montgomery G.I. Bill (SR-MGIB) that pays up to $9,468 in total benefits. The SR-MGIB is non-contributory on the part of the reservist, and to be eligible, members must agree to a 6-year enlistment. As an added bonus, applicants who enlist in selected career fields that are in short supply can qualify for the SR-MGIB Kicker that pays up to an additional $350 per month. Our NPS numbers are steadily climbing and we're pleased with the progress we're making here. On another front, we're asking all our people to become ambassadors for

the Air Force Reserve. Officially, we call it the "Get One Program," and this initiative recognizes reservists who are successful in referring potential applicants to speak with one of our Air Force Reserve recruiters. Studies have repeatedly shown that most people who join the military already know someone who is a member and has good things to say about their experiences.

As of April 2001 we are meeting our fiscal year 2001 recruiting goal and are hopeful that we will achieve our goal of 10,064 despite the earlier mentioned barriers. We need to increase our recruiting efforts and refocus our advertising to compete. In fiscal year 1999, we increased our recruiting budget to $5.4 million and our advertising budget to $8.7 million. We have increased our recruiting staff by nearly 10 percent, adding 30 recruiters to help bring our numbers up. Congress has been very responsive in helping us with additional recruiters and funds to do this. Together, these initiatives should help us turn the tide.

Retention

While we continue to meet our overall command retention goal of 82 percent, the strong economy has had a significant impact on our ability to retain personnel—particularly in critical skills. The economy will undoubtedly continue to challenge us in attracting and retaining the skilled professionals we need, so we must find new ways to strengthen our retention rates particularly for full-time pilots and second term enlisted personnel. While overall officer retention rates are healthy, the current pilot retention rates do not reflect the projected escalating attrition rates that will challenge all Air Force components. Historically, pilots stayed until retirement, but recent indicators reveal an increase in the number of Air Reserve Technician pilots who are leaving early. As with the active component, increased hiring by major airlines, high OPTEMPO and perceptions of better civilian pay and working conditions are the reasons for leaving. The USAFR predicts a pilot shortfall of 325 for fiscal year 2002 based on a 35 percent Active Duty pilot capture rate. A Rated Management Task Force has been formed to study this issue and develop a Total Force approach to solve it. We hope that some of the pay incentives, as well as other enhancements such as improvements in scheduling predictability that the EAF provides, an increased use of telecommuting to better manage ancillary training requirements, protection of current benefits and increased parity of benefits will help us solve this problem.

These initiatives should have an equally positive effect on retention of our first term airmen. Our retention rate in this category remained equal to our fiscal year 1999 rate this past year, probably due to OPTEMPO concerns. We believe our plan to relieve some of the turbulence associated with OPTEMPO should turn the trend upward. In the future, we will continue to focus on achieving an equitable parity of pay and benefits, as well as some other important initiatives.

In sum, the matter of recruiting and retention is the issue of greatest concern to me, and we are taking positive steps to fix this situation as I lead the Air Force Reserve in this new millenium.

OPTEMPO AND READINESS

As full participants in the Total Air Force, our readiness remains good overall, and we are part of nearly every Air Force mission. One of the keys to our success is the leverage inherent in a fully trained and accessible force waiting on call. In reality, today's global situation dictates that we serve as a peacetime augmentation force as well as a ready, wartime force.

Readiness

The current Reserve Component force structure is of sufficient size and composition to meet the wartime requirements identified by the Bottom-Up and Quadrennial Defense Reviews. Reserve missions and roles have expanded, despite decreasing end strength. We are trained and resourced to meet our part of the National Military Strategy and currently are programmed with enough forces to help prosecute two major theater wars. Air Force Reserve units maintain readiness levels on par with active duty units. More than 95 percent of Air Force Reserve units are currently combat ready, closely paralleling our active force. Reserve units have comparable equipment in quantities proportional to their active duty counterparts and participate in day-to-day operations, exercises, and training. In addition, Reserve units train to active duty standards and receive regular inspections from their gaining major commands. Historically, during operational readiness inspections, 100 percent of the inspected Reserve units received satisfactory or higher ratings, with most of these units rated as outstanding or excellent.

Accessibility & Volunteerism

Volunteerism remains our mainstay. The Air Force Reserve and Air Force lead the way in providing responsive Reserve forces to meet service and national needs. In the Persian Gulf and Haiti, as well as on-going operations in Turkey, Bosnia, Southwest Asia, the Caribbean and Central and South America, the Air Force Reserve responds to all requests for additional forces with volunteers only. And, while the 1999 Presidential Recall activated approximately 1,400 Reservists, hundreds more volunteered as well.

The Air Force Reserve remains on the leading edge of volunteer participation for peacetime operations, as demonstrated by the implementation of the Expeditionary Aerospace Force (EAF). By using volunteers, we minimize potentially adverse impact on readiness and training, recruiting, and retention. Long range Aerospace Expeditionary Force (AEF) scheduling allows our personnel to plan well ahead and to volunteer for deployments that best fit their schedules, permitting better management of PERSTEMPO. Reserve resources integrate with those of the Air National Guard and the active Air Force to provide maximum capability for our AEFs.

Of concern is the impact of OPTEMPO on our Reserve families. Between EAF, other operations, exercises, and required inspections, participation rates continue to rise steadily each year. The Reserve set a record pace for OPTEMPO in 1999 as a result of Operation ALLIED FORCE. Then, an average of nearly 3,000 Reservists deployed overseas each month and worked more than 712,000 Military Personnel Appropriation (MPA) mandays, the highest number since Desert Storm. In fiscal year 2000, our average number of personnel deployed overseas averaged nearly 1,700 per month. We began fiscal year 2001 at a lower number but grew to over 2,000 deployed in March. This total does not include the number of Reserve Personnel Appropriation mandays and other training days that also were worked. There can be no doubt that the days of the "weekend warrior" are long gone.

This level of participation provides unique challenges for the Air Force Reserve. Aircrew members are participating an average of 125 days per year, with some weapons systems averaging even higher. Unit personnel average about 90 days and Individual Mobilization Augmentees (IMAs) average 69 days per year. This is in addition to their civilian jobs and comes at a time when the economy is supporting near full employment.

Approaching limits

Our force is leaning forward to meet each new tasking as it occurs, but this is not without cost. While we have received few complaints from our Reservists' employers, our people tell us that their bosses have started to question their participation. Our solution is to provide as much notice as possible of impending deployments as well as to educate our employers about the importance of their Reservists' contributions. We strengthen our partnership with civilian employers in several ways. We foster two-way communication between Reservists and their employers, sponsor Employers' Days and support Employer Support of the Guard and Reserve (ESGR) Bosslifts, all of which give civilian employers the opportunity to see what their Reservist does when he or she is away from work. We also have vigorously pursued feedback from employers and they have expressed an interest in monetary relief. We strongly support efforts to recognize the sacrifices of employers of members of the Ready Reserve and National Guard. As long as we have the backing of our Reservists' employers, we anticipate being able to continue to meet future requirements with volunteers. But we must continue to be able to manage the rotation of our forces and the length of their deployments.

The Air Force Reserve is also aggressively pursuing ways to better leverage the time of Air Force Reservists. We are building a telecommuting program, restructuring our inspections program and reviewing ancillary training requirements. Finally, we continue to pursue the quality of life issues that are key to our people. As noted earlier, our focus is on entitlements, improved lodging facilities, family services, reducing personnel turbulence and parity of benefits, regardless of length of orders.

Reserve Health Care Reform

While pay is only one reason people join the Reserve, there is more involved in their decision to stay than just money. A number of intangibles are part of the total decision process, most of which are characterized as quality of life issues. Advances in Reserve quality of life are in no small part the result of congressional interest. A number of recent initiatives have lightened the burden a Reservist carries. In 1999, medical care for members who are injured while on inactive duty was clarified and extended in the fiscal year 2000 bill, dental plans were expanded and the Secretary of Defense was given the authority to waive Tricare deductibles for depend-

ents of members called to active duty for less than one year. The positive effect these measures have had on the USAFR is enormous. It provides peace of mind to our members to know that they and their families will have access to health care when they need it most.

This past year demonstrated that the health care provided for our Reservists has cleared some major hurdles, but still has a few to go. I know that health issues have been the subject of several hearings this year. We appreciate the Congress' continued interest in the welfare of our members.

MODERNIZATION

For the past 30 years the C–141 has been the backbone of mobility operations for the United States military in peacetime and in conflict. In the very near future the C–141 will be retired from the Active Duty Air Force. However, the Air Force Reserve continues the proud heritage of this mobility workhorse. AFRC crews will continue to fly the C–141 through fiscal year 2006. It is crucial that we remain focused on flying this mission safely and proficiently until follow on missions are found.

With the release of the Mobility Requirements Study 05 (MRS–05), it is still uncertain as to follow-on missions for our C–141 personnel. Replacement missions must be more than the insertion of another airframe. They must be a viable mission that includes modernized equipment. I will continue to push for modernization initiatives to keep AFRC the "go to" organization when conflicts arise.

One of the most challenging modernization issues concerns our unit-equipped KC–135s. Five of our seven air refueling squadrons are equipped with the KC–135R, while the remaining two squadrons are equipped with KC–135Es. The KC–135E, commonly referred to as the E-model, has engines that were recovered from retiring airliners. This conversion which was accomplished in the early- to mid-1980s was intended as an interim solution to provide some improvement in capability while awaiting the conversion to the R-model with its new high bypass turbofan engines and other system modifications. We continue to look for support to modernize our remaining KC–135E fleet.

As AFRC moves into the future and we analyze our interoperability with the Active Component (AC), a key issue is our ability to work within the AC structure while providing like capability. AFRC has 127 C–130s including the E, H, J and the N/P models. Air Mobility Command, as the lead command for C–130 modernization, has published a "Road Map" detailing the fleet modernization schedule. Near term modernization specifics for the AFRC C–130 fleet are additional removable cockpit armor sets for deploying aircraft, traffic alert and collision avoidance systems, and autopilot replacements. These modifications target aircrew safety and survivability. Future plans look to include forward-looking infrared for the HC–130 fleet.

In order to fly productive and effective missions as part of the Total Force, the theater CINC requires aircraft equipped with a core combat capability. We call this core capability the Combat Quadrangle. The quadrangle's sides represent our four focus areas: 24 Hour Operation Capability, Combat Identification Capability, Precision Attack Capability, and High Threat Survivability. All of these core capabilities are required to maintain combat compatibility with the active forces before the theater CINC will allow AFRC participation in theater. With shrinking budgets and reduced active duty force structure, the Air Reserve Components face a challenging goal. Reserve aircraft are poised to make significant progress in the near future. For example, Air Combat Command (ACC) is upgrading the F–16 Block 25/30/32 in all four core areas with Night Vision Imaging System (NVIS), Situational Awareness Data Link (SADL), smart weapons, and the ALE–50.

The A–10s are also poised to make progress in satisfying the core capabilities of the combat quadrangle. ACC is upgrading the A–10 with much-needed new Attitude Indicators for safety of flight concerns. The most promising development is the revamped precision engagement program that will incorporate SADL, targeting pods and smart weapons capability by 2006.

The 403rd Wing at Keesler Air Force Base, Mississippi, oversees both the Weather Reconnaissance and "Slick" J-model conversions for the Air Force Reserve Command. Once conversion is complete, the 53rd Weather Reconnaissance Squadron will consist of 10 WC–130J models and the 815th Tactical Airlift Squadron is scheduled to have 8 C–130Js. Presently, there are four WC–130J models at Keesler undergoing Qualification Test and Evaluation (QT&E). All 10 of the WC–130J aircraft were to be at Keesler in the first quarter of fiscal year 2001, but discrepancies discovered during the QT&E are delaying AFRC's acceptance of the aircraft from the manufacturer. AFRC is working with the manufacturer to resolve the QT&E recognized deficiencies.

The acquisition of the LITENING II targeting pod marked the greatest jump in combat capability for AFRC F–16s in years. At the conclusion of the Persian Gulf War, it became apparent that the ability to employ Precision Guided Munitions, specifically Laser Guided Bombs (LGB), would be a requirement for involvement in future conflicts. Without this capability, AFRC F–16s took a backseat to other fighters that could employ LGBs. A joint effort with the Air National Guard resulted in the fielding of a targeting pod equivalent or better in all aspects to what active duty fighters were using. Delivery of this targeting pod, LITENING II, began last spring, just in time to support an AFRC F–16 deployment to Operation Northern Watch in support of AEF. LITENING II affords the capability to employ LGBs effectively in both day and night operations, any time at any place. This capability allows AFRC F–16s to fulfill any AEF tasking requiring a self-designating targeting pod platform, providing needed relief for heavily tasked active duty units. This acquisition has put AFRC F–16s at the leading edge of combat capability, second to none, and ready to deploy and operate in any theater of operation.

In the early 1980s as an initiative to improve readiness in the Reserve Components, Congress provided funding through an appropriation called the National Guard and Reserve Equipment Appropriation (NGREA). Public laws and legislative language provided that this equipment appropriation would be intended to enhance readiness and combat capability, and to resolve the modernization issues of the reserve forces. The Air Force Reserve Command quickly put it into use as the primary source for modernizing its fleet of aircraft. It procured new weapon systems, miscellaneous and special operations equipment. With NGREA, the AFRC was able to fix many shortcomings in many operational aspects. However, several years ago, the Department of Defense initiated a shift in the equipping philosophy by encouraging the Services to be more responsive in funding the equipment needs of its Reserve components. This requires the Air Force to be more cognizant in the budget process by providing the necessary equipment and modernization funding for the Reserve and Guard. As the implementation of this initiative took place and NGREA levels declined as planned (from as high as $362 million in 1992 to as low as $5 million in fiscal year 2001).

With potential elimination of NGREA, modernization and relevant Air Force Reserve mission capabilities and combat readiness remain top priorities in a very tightly constrained fiscal environment.

NEW MISSIONS

New missions picked up by AFRC this year support Air Force Material Command (AFMC) with their Test Support and Depot Flight Test requirements. As Reserve Associate programs, AFRC provides personnel to man these two programs while the aircraft and equipment will be owned by AFMC. The Test Support program at Edwards Air Force Base involves flight testing of new aircraft modifications and equipment. The Depot Flight Test program involves the flight testing of aircraft that are in the maintenance depots for periodic maintenance and overhauls. These are excellent missions for the Air Force Reserve as they take advantage of the high experience levels generally found with Reserve personnel. To date, AFRC has approximately 75 percent of these new positions filled, and operations procedures and agreements are still evolving, but we are looking forward to a long and successful Reserve presence with these important test missions. Congressional support of these mission transfers in the fiscal year 2000 Defense Acts was instrumental in starting these efforts successfully.

In another first, the Air Force Reserve became active in the operational test process last year as well. The 403rd Wing at Keesler AFB is working hand-in-hand with the Air Force Operational Test and Evaluation Command and Air Mobility Command (AMC) as operational testing required to bring the new C–130J into the inventory continues. The C–130J has many improvements over the older variants of the C–130. Updated engines provide greater power and fuel efficiency and the modernized avionics are a great step forward for this workhorse of our airlift fleet. Changes in the cabin area have also reduced the time and effort involved in loading and unloading cargo. The 403rd Wing's 53rd Weather Reconnaissance Squadron is also working with AMC's 33rd Flight Test Squadron to complete operational testing on the Weather Reconnaissance version of the C–130J to replace their aging aircraft.

The 944th Fighter Wing, Luke Air Force Base, Arizona, is scheduled to transfer from Air Combat Command to Air Education and Training Command (AETC) with student training planned for July 2001. This conversion is the result of an identified F–16 Formal Training Unit (FTU) shortfall that was addressed at the 1996 Aircrew Management Summit. The unit will provide Total Force support for the active duty,

Air Force Reserve and Air National Guard that is needed to accomplish F–16 formal training requirements and satisfy the determined FTU shortage.

AETC undertook a study to assess the feasibility of Air Reserve Component Formal Training Unit associate units and approved a program at Corona Top in June 1999. This concept made more active duty fighter pilots available for operational assignments while retaining an experienced Reserve Instructor Pilot cadre to train students in the F–16. Activated in January 2000, the 301st Fighter Squadron operates under the integrated associate concept which requires a manpower and administrative commitment from the USAFR while flying hour, aircraft and facilities are provided by the active duty.

The 94th Airlift Wing (AW) at Dobbins ARB, Georgia, transferred from Air Mobility Command to Air Education Training Command in October 1999. The unit converted from a Combat Support coded mission to a Training coded mission. It was determined that the Air Force needed additional C–130 FTU capability and AFRC could provide that support. With a significant portion of the tactical airlift mission in the Air Reserve Components, the additional schoolhouse-basing requirement was necessary. The unit conducts comprehensive C–130 training for both the H–2 and H–3 models and is already producing students. With an fiscal year 2003 production goal of 72 pilots, the 94th AW will also train navigators and flight engineers, all to augment the Total Force.

In fiscal year 2000, Air Force Reservists joined the 414th Combat Training Squadron, the "Aggressors", as associate members. The program established a Reserve associate organization collocated with the elite 57th Wing at Nellis Air Force Base, Nevada. The Aggressors provide expert simulation of potential threat systems and tactics during the advanced composite force training conducted on the Nellis ranges over Southern Nevada. The most notable of these exercises is the world-renown Red Flag. The objective of adding reserve personnel is to retain corporate knowledge pertaining to adversary threat and operational expertise in the Aggressors. Additionally, it allows the Aggressors to select from an expanded resource pool to enhance the training received by the Combat Air Force.

Two USAFR full time enlisted positions were established with the Thunderbird Demonstration Team at Nellis in fiscal year 2001. These individuals perform aircraft maintenance duties of Crew Chief and Aircraft Specialist. This mission is considered associate in nature as the reserve personnel are assigned to the Thunderbirds and integrated within the unit.

Today's Air Force Reserve Space Program is an operationally integrated space force that will continue to grow in a robust, highly technical environment. The Air Force Reserve 310th Space Group is the first Air Force Reserve organization totally dedicated to leveraging Air Force Reserve talent to space operations. They will continue to meet the challenge of providing leadership and a vision of future Air Force Reserve space operations involvement.

FINAL THOUGHTS

In summary, Air Force Reserve Command is committed to meeting our people, readiness and modernization challenges, so we remain a fully integrated partner with the Air Force. Reservists with the support of their families and civilian employers enable AFRC to be fully combat capable and meet its worldwide commitments.

Mr. Chairman, I thank you and your committee once again for your assistance in making us part of the worlds best Air Force, the USAF. I appreciate the opportunity to meet with the committee today to share my views with you and I look forward to answering any questions you might have for me.

RECRUITING NONPRIOR SERVICE PEOPLE

Senator STEVENS. Thank you very much. Each of you has mentioned in a way the possibility of acquiring people who have no prior military service, and I was wondering about that the other day. Do you have sufficient tools and authorization to reach out and attract young men and women to come in who have no prior service and give them training so they could, in fact, be part of a deployable force within a period of time, and what is the cost of that, compared to the cost of acquiring someone with prior service? General Plewes.

General PLEWES. We are going under a change right now. In the past, we did about 50 percent prior service and 50-percent nonprior

service. This year we are exceeding our goals in regard to the nonprior service folks by about 122 percent and missing our goal on recruiting prior service by 80 percent. We are at 80 percent of where we should be. We are undergoing a shift there, and it has, as you mentioned, some very interesting and important consequences for us. First of all, it increases the training load in our initial entry training base, and we are now competing with the National Guard, which is going through the same kind of a change, and the active force for training slots in the highest times of activity during the year.

Senator STEVENS. Take us through that, General. What do you do if you attract someone—let us say they are out of high school and a year in college. What do you do with them when they sign up?

General PLEWES. We give them up to a year to schedule themselves to go into the regular training program, which is the same training program that the active force does.

Senator STEVENS. How long does that take?

General PLEWES. That is usually a 4-month program, and it's up to 6 months in some cases.

Senator STEVENS. They have to work out an opportunity to leave their employment?

General PLEWES. That is correct.

Senator STEVENS. There is no other way to do it at night and weekends?

General PLEWES. No, sir. We have a split options program where they can do it over the course of two summers, if they are going to school, for example, and we make it easy for them to do that. Otherwise, they do essentially the same thing to get into the service as the active duty soldiers do, but that does have repercussions for us. First of all, it increases our training bill.

Senator STEVENS. Tell us about that, too. How does it increase the cost?

General PLEWES. Because the prior service folks that come to us are previously trained, they already have the training and the skills they need. They just easily come over to us and enter our units. So the folks who are nonprior service have to be not only recruited from recruiting stations around the country, but they have to be provided, initial entry training. Then the units have to train them in their additional skills when they get back. It does increase the training bill.

Senator STEVENS. We are not talking about specialists now. We are not talking about medical people. This is just a general comment.

General PLEWES. It is a general comment across the board.

Senator STEVENS. For riflemen?

General PLEWES. That is correct.

Senator STEVENS. Admiral, what is your experience?

Admiral TOTUSHEK. We are a little bit different. We have got a unique situation where we recruit nonprior service people only if they have a skill that we can use in the Navy. We do not go out and get a generalist. We are looking for specific skills.

Senator STEVENS. What do you do when your enlistments fall off?

Admiral TOTUSHEK. The enlistments of the nonprior service people?

Senator STEVENS. The prior service people.

Admiral TOTUSHEK. That is why we are out there in this market, because we cannot—if you take the people that leave active duty every year, throw out the ones that are too senior or do not fit the skill set we are looking for, if we recruit every one of them we would not make our goal, so we have got to be in this market, and that is why we are in that market, but not in as big a way as some of the other services.

In our particular service, because they have the skill already we need, we take them to a nonprior accession school that is 2 weeks long, and then we spend the rest of the year working with them in their centers to turn them into a sailor.

Senator STEVENS. Thank you. Let us move along. General McCarthy, what do you do?

General MCCARTHY. The Marine Corps Reserve, since it is organized exactly like the active, or almost exactly like the active component, has essentially the same demographics, so it is primarily a first-term force.

Senator STEVENS. Can you become a Marine Reserve without prior service?

General MCCARTHY. Yes, sir. About 65 percent of the drilling reserves are nonprior service.

Senator STEVENS. How long does it take them to become qualified?

General MCCARTHY. Over all, it takes about 9 months to a year, but they go through exactly the same recruit training, they go through exactly the same initial training, the initial combat training and so forth.

Senator STEVENS. It is the same assignment, then, with the marines, right?

General MCCARTHY. Exactly.

Senator STEVENS. Why would I not just join the Marines if I was going to do that?

General MCCARTHY. Many change their mind after they go to boot camp and switch over and stay on active duty, which is fine with us, but many want to come back to their home town. They want to pursue a career or go to college. We do not have an exact number on it, but we think that about 35 to perhaps up to as high as 40 percent of the Marine Corps, of the enlisted Marines in the Marine Corps Reserve are college students, but they take a year off, they go to recruit training, they go to initial combat training, get a skill, and then come back and start their education.

Senator STEVENS. What is the age limitation of getting in the Reserves, in the Marines?

General MCCARTHY. Sir, I believe it is 28, but I ought to take that question for the record to be 100 percent sure.

[The information follows:]

Generally, the maximum age that Non Prior Service applicants can enlist in the Marine Corps Reserve is 28 years of age, inclusive. Our policy is that an applicant must be accessed onto active duty in the Marine Corps Reserve prior to their 29th birthday. Commanding Generals of the Marine Corps Recruiting Regions may waive the maximum limit up to age 35.

RECRUITING

Senator STEVENS. General Sherrard.

General SHERRARD. Sir, as I mentioned in my opening statement, we are about 80 percent prior service. That is really the key to our success, because we are able to grab that highly experienced member and bring he or she into our force and they step up as a full combat-ready individual on day one.

Senator STEVENS. Is that true for other than pilots? Do you have greater administrative——

NONPRIOR RECRUITING

General SHERRARD. Yes, sir. We accept them across the board. But as I previously mentioned, the low number of prior service is a real issue for us. In the early nineties there were some 50,000 members eligible who were separating from the Air Fore. Today it is about 15,000, and we are in competition with the Air National Guard, as well as with the other Reserve components for those members. Thus, we are being forced to go look at that nonprior service individual in much greater numbers than we ever have in the past, and that does, exactly, as General Plewes said, it does drive up our training costs. It extends the time for that member to attain the combat-readiness level necessary for them to be ready and able to deploy with the units.

So we have got to make certain that we retain those members we have today, and then for every active duty member that separates, we need to do our dead level-best to have an opportunity and a place for them inside our force, and make certain our entitlements and the benefits make an attractive offer for them. With the economy being so good, there are a lot of opportunities out there for them to go and engage in and not bring that real investment that we have made, that the American taxpayers have made in those individuals, back into our Reserve force to be used.

PILOT RETENTION

Senator STEVENS. It was about 18 months ago we were told the reenlistment rate for pilots had turned around. We used to get about 60, 70 percent of them on the first time for reenlistment, and we were told it was about 27, 29 percent actually reenlisting. Did you do any studies? How many of those did you pick up in the Reserve, if they did not stay on the Active Air Force? Did enough of them keep contact with you? Were you able to recruit enough of those people into the Reserves to maintain the strength?

General SHERRARD. We maintained our strength. We could certainly take more. We did not get them all, and that is the battle. We are retaining about 83 percent retention on our pilots. It runs around 84 percent of our——

Senator STEVENS. Back up.

General SHERRARD. Excuse me, sir?

Senator STEVENS. That is back up. We were told it was very low. Oh, this is Reserves, pardon me. I was talking the Regular Air Force now.

General SHERRARD. We try to bring as many active duty separates into our fold, as possible. I do not have actual numbers, sir,

which show you how many of those we hired. I will tell you, depending on the organization and the locale, there are some that have waiting lists and others that have vacancies today, but in our Reserve force today we are roughly 200 pilots under what our requirement.

But the important thing is, retention, and retaining those members so that we do not lose them. We are seeing, as I said earlier, there has been an increase in recent years for members, when they get 20 satisfactory years they are willing—or are stepping up and saying "I have to depart, I cannot afford to give you the time that you are asking for me to continue to operate." So we need to have some type of incentives, not only pilots, but across the entire spectrum, to carry those members to the max extent possible inside their career, whether it be their mandatory separation, or if they are enlisted their high year tenure date.

Senator STEVENS. I do not want to belabor this now, but it looks like we are going to have to start some innovative concepts, perhaps even a summer school type thing for college students between their semesters so they can take a summer and in 90 days become a part of the Guard and Reserve forces. We have got to do something innovative, I think, to pick up the pace of attracting these young people if we want to expand the way it looks like we are going to have to expand in the near future.

Senator Inouye.

Senator INOUYE. Thank you. I would like to follow up where you just left off. There was a time, and we hate to admit this, when recruiting was not that difficult, when the economy was bad, or when there was a hot war going on there were those who wished to avoid the hot war by getting into the Reserves. I can understand that, but today we have a different situation.

For example, a recent study indicated that a little over 5 percent of our population between the ages of 18 and 65 have seen any military action, put on the uniform. Over 94 percent of our people between the ages of 18 and 65 have never put a uniform on and, as a result, you have most of our employers with a little or no military background and, as such, may have some difficulty really appreciating what military service is, as far as our country is concerned.

Add to this another dimension, that the new military is becoming high tech. A few days ago, I went to an exhibit here in the Senate which showed the infantry rifleman projected for 10 years from now. He looked like a spaceman, you know, with the Star Wars helmet and body armor, and all of this, and obviously he happened to be someone who knew something about high technology if he is going to fire a rifle around the corner through some kind of scope.

When you add all of these things—I must congratulate you for what you have done in your recruiting so far, but as the chairman has indicated, I think the time is coming when recruiting the proper man and woman for the positions you have is going to become almost impossible. I for one have seriously thought about the possibility of reinstating the draft again.

Senator STEVENS. I thought you were going to say reenlisting again.

Senator INOUYE. The studies I have seen would indicate that we are at a very crucial point. All the services are now taking the leap forward to become modern, and if you are going to be compatible with the active forces you will have to keep up with them. I do not know if the budget calls for that.

Add to this another element that was not in place 15 years ago, the operational tempo, the op tempo of the Army, for example, in the Guard and Reserves, I think it is 20 times what it used to be 15 years ago, and I cannot imagine what the employers are saying to themselves.

So when you add all of these up, I think the chairman is right on target, we had better sit down and figure out, how we are going to get these men and women to fill these slots. You know, we are not just looking for category 4's now. We cannot be satisfied just with category 3's, so Mr. Chairman, I think we have got to do something.

Senator STEVENS. It calls for some innovation, it really does.

Senator INOUYE. Senator Dorgan had to leave the hearing, but he had a few questions he would like to submit.

Senator STEVENS. Yes, sir.

Senator Cochran.

TAX REFORM

Senator COCHRAN. Mr. Chairman, thank you. One thing that occurs to me that we can do in this debate on our tax reform issue is include the provision that I have heard is needed in the Reserves, and this may apply to the National Guard as well, for people who are going to drill and incur out-of-pocket expenses for bills or lodging and the like, I understand that those that are not reimbursed now cannot be deducted from income tax, but to make those deductible would be a benefit that might keep somebody going to the drills and staying in the Guard and Reserve who might drop out. Is that a consensus among the Reserve forces today?

Admiral TOTUSHEK. If I could speak for the group, I would say it is. It will be a cost to the Guard and Reserve, because we recruit an individual, but we retain the family, and any break we can give them will get that family to want to stay.

Senator COCHRAN. But as I understand it, too, that legislation that we have pending in our Finance Committee here in the Senate, and I am cosponsor of it, also provides a tax credit to employers as incentive to let them employ somebody and still not suffer unnecessary financial harm, because that person is going to be away from work from time to time. Is that something that you think is also needed?

General PLEWES. Yes, sir. I will just comment on that, if I could. First of all, our employers are doing wonderful things for our soldiers. We have very few cases in which there are issues between employers and soldiers. But there is a cost to the employer when the soldier is deployed, and that cost includes, not only the cost of the substitute for that employee, but also the lost productivity. A tax credit would, I think, go a way toward taking care of that.

Senator COCHRAN. There are two parochial issues in procurement that have been brought to my attention. We have a Raytheon plant in our State and we were told that two of the highest moderniza-

tion priorities, one in the Army and the other for the Marine Corps, is in the hands of this company that make these modernization changes.

One has to do with the aircraft in the Marine Corps, upgrading the air control radar that provides information and helps you better protect troops in the field during battle. Is this something that is an unfunded need for the Marine Corps that we should consider putting in our bill?

General MCCARTHY. Sir, the aircraft upgrade is for our F–18A models, to enable them to fire precision-guided munitions, and we are in the process right now of upgrading those aircraft a few at a time. Both the active component and the Reserve component have aircraft to be upgraded, and as it stands right now we still have both active and Reserve component aircraft that require that upgrade.

Senator COCHRAN. I understand, too, that the Army has a Sentinel battlefield radar where you are trying to modernize and upgrade that. That is also something that I think the contractor in Mississippi could provide. Is that a need that is unfunded in this budget request?

General PLEWES. I will have to get back to you on that, sir. It is not part of the needs of the Army Reserve. I believe it is part of the active force, and I will have to get back to you on the funding.

[The information follows:]

SENTINEL BATTLEFIELD RADAR

Although the Army Reserve does not have any requirement for the Sentinel, the Total Army requirement is 228. Of that number, 140 have been funded.

Admiral TOTUSHEK. If I could, the Naval Reserve is upgrading our F–18's as well. It is a similar, same contractor item that we need to upgrade our F–18's as well, so it is an unfunded need for us.

Senator COCHRAN. That is good to know. Thank you, Mr. Chairman.

Senator STEVENS. Senator Feinstein.

TERRORISM

Senator FEINSTEIN. Thanks, Mr. Chairman. Gentlemen, I wanted to confine my time to the issue of terrorism. Last month, Senator Kyl and I, as the chair and Ranking Member of the Terrorism Subcommittee of Judiciary, heard the Hart-Rudman report, and their belief, that commission's belief is that the largest single threat we face is a major terrorist incident in this country.

The 27 National Guard Weapons of Mass Destruction Civil Support Teams are supposed to be the backbone in the United States defense system in the case of a terrorist attack on American territory. They are supposed to be active by this spring, and yet their preparedness and management has been criticized by a whole host of Government reports. In addition, DOD has certified them as, quote, not ready, unquote.

The main criticism, as I understand it, is that these teams would arrive too late at an incident to really be effective. What is your assessment of the criticism, and what can be done to improve the

preparedness of these Civil Support Teams? Any one of you that wants to go first would be fine with me.

General PLEWES. The next panel may be able to more specifically address the issues with the teams that are being established, but all of us have capabilities within the Reserve components that are necessary if we are to make a national response to some of these threats.

For example, in the Army Reserve I have 70 percent of the Army's chemical, which equates to over half of the Nation's chemical defense in our force. I have over 70 percent of the hospitals as well. We are training with and supporting the National Guard in these matters, and I believe that we are at the first step, only the first step of being prepared in these areas.

Senator FEINSTEIN. So these teams, in your view, are not ready?

General PLEWES. I cannot assess whether those teams are ready. I will say that the teams are the first step, and that there is a very large component of Reserve support behind them. So there are two different things I think we can look at here.

Senator FEINSTEIN. Does anyone else want to comment on that?

General MCCARTHY. I would just comment again, the teams are not within either my purview or expertise, but like the Army Reserve, the Marine Corps Reserve is, as they say, forward-deployed all over the country, and so it is prepositioned to provide assistance, and we consider that one of our missions, and something that we have resources that can be put at the Nation's disposal and, like everybody else, we have a long way to go in terms of preparing for that, but that is clearly an issue that we are engaged in.

Senator FEINSTEIN. Well, now I am really concerned, because clearly, if you gentlemen do not know, the chances are that the support efforts are not available, and are not going to be very effective, and I am very concerned, because both from my Intelligence Committee briefings as well as what we have done in Judiciary, we are not ready to respond to any kind of a major terrorist act, and there is no real attribution, nor is there anyone really in charge that I can see at this stage. So my concern is that if the Guard is going to be the heart of this sort of national support effort, and you gentlemen are the head people, what are you going to do?

Senator STEVENS. Senator, if I may, the Guard will be up next. These are the Reserve forces.

Senator FEINSTEIN. Is not the Reserve involved in that as well?

Admiral TOTUSHEK. Not directly. That is what we are trying to say.

Senator FEINSTEIN. Then I must apologize to you.

Admiral TOTUSHEK. But the point is, we all do have capabilities. Part of the issue, as you kind of touched on it there is who is in charge, and it starts off to be a Federal Emergency Management Agency (FEMA) kind of issue, and if it becomes nationalized and those Guard teams kick in, any of us who happen to have forces in that area would be put on notice to provide forces, depending upon the size and the scope of the catastrophe.

Senator FEINSTEIN. Because what I do is, I go back to my days as mayor. If there were to be a major terrorist attack, I would need somebody to pick up the phone on a national level and say, I need help, and I need it right now. I mean, it is hard to believe that I

would call FEMA for that to be able to really mobilize. Whether it is a military response or a Federal Bureau of Investigation (FBI) response, that response has to happen right away.

Senator STEVENS. Senator, if I may interrupt again, those are the hearings going on upstairs right now, our committee and Armed Services and Intelligence, and I think Commerce to some extent, and we are trying to find out—there are 46 different agencies now charged with some portion of the response to disasters, and we are trying to find out——

Senator FEINSTEIN. I know that, Mr. Chairman. I have had those briefings in the Intelligence Committee. I am aware of it. I have also read all of the reports.

Senator STEVENS. We are trying to work out answers to your questions. We are trying to work out, with the administration, an answer to your question of who should be in charge, but if we may, we could go right to the Guard forces and you could ask that question of them, because they are the ones that currently have the assigned responsibility, if that is all right with you gentlemen, and you Senators, we will excuse you gentlemen and we will be back to you after we listen to the Guard perhaps sometime.

I do want to have this dialogue, though, about enlistments, and I want to suggest to you we may have to convert some of your positions to civilian positions, and let you bring people in without putting them through this training process, particularly in the IT area, the medical area, and other areas, and see what we can do to give you additional people that you do not have to train, but they are going to do things in peacetime, and you can concentrate on training people for wartime.

Thank you very much, gentlemen. We will talk to you later if we may.

We would like to call up the Guard, and Senator, I do not mean to interrupt you or in any way be offensive, but that hearing, we have got 4 days of hearings with this committee and Armed Services, and you are a member of two of those committees.

Senator FEINSTEIN. Yes, and we have had the briefings, and they have been disappointing at best.

Senator STEVENS. Thank you very much to the Reserves.

NATIONAL GUARD BUREAUS

STATEMENT OF GENERAL RUSSELL C. DAVIS, U.S. AIR FORCE, CHIEF, NATIONAL GUARD BUREAU

Senator STEVENS. We are now going to hear from the leadership of the National Guard, Lieutenant General Russ Davis, Chief of the National Guard Bureau, Major General Roger Schultz, Director of the Army National Guard, Major General Paul Weaver, Director of the Air National Guard.

I congratulate you, General Schultz, on your third star. General Weaver, I understand this may be your last appearance before us. We want to go on record immediately to thank you for your dedicated service and for your assistance to this committee over the years. We look forward to your statements here today, and I believe that if you could—I have to chair that other hearing at 11:30, so Senator Inouye will continue this, but we would appreciate it if you could keep your statements as short as possible, and we will go immediately to Senator Feinstein so she can ask her questions.

Senator FEINSTEIN. Thank you. I will not repeat it, but if you gentlemen can respond, that would be terrific.

WEAPONS OF MASS DESTRUCTION

Senator STEVENS. The question is, who is in charge?

General DAVIS. Well, we just had a statement yesterday. Prior to yesterday, the Assistant to the Secretary of Defense for Civil Affairs, or Civil Support was the position that was in charge of weapons of mass destruction in any of the incidents and all the operations relating to that. There were some other subordinate agencies within the Department of Defense who are working in conjunction with that position.

Yesterday, it was announced that all those activities would move to the Assistant Secretary of Defense for Special Operations and Low Intensity Conflicts.

Senator FEINSTEIN. Can you comment on the Civil Support Teams, and the reports that have come out saying that they are not ready, and that they were due apparently to be ready and deployed this spring?

General DAVIS. Yes, ma'am. There are a number of issues associated with that. The Department of Defense Inspector General, they report, after having gone out and talked to the teams, and looked at their equipment and made some assessments, those, some 26 issues came out of that. One of the issues dealt with the issue of doctrine training, to what standard, and to do what, as a specific mission.

These teams were really designed to do three things, to get to an area and assess what was there, if it were a chemical, radiological, or biological incident, to determine what the agent was, and to pass that information back, number 1.

The other thing they were to do is advise on the kinds of measures that you take. If it is a biological incident, say, as an example, smallpox or something like that, know which agencies are available to assist, and the local population, if it is in a city, or if it is in county, they would go and they would assess what is there and then they would advise them, if it is biological, you need medical personnel, you need this, because they have medical personnel on these teams.

These teams are 22 people, and they are highly trained folks who have been training for about 2 years, and they have met all of the training standards that we have established for them. We are working our way through some additional issues. Unique for this operation, ma'am, are things like, we tried to put together these teams in a 2 to 3 year period.

The norm for establishing a brand-new operation like that, with the training and the equipment, and teaching people to operate the equipment, is about 5 years, to establish the doctrine, get all the training programs, get them certified and that kind of a thing. In an effort to fast-track, or what is called spiral development in the research and development community, in order to do that, you are doing a lot of things simultaneously, and we missed a few beats in the process of that.

The report deals with the fact that we have some equipment which has not been certified. It is a mobile analytical lab. It is a vehicle, and into that we put in equipment, a gas spectrochromography, or something like that. What you do is, you hold it out and it will give you an analytical, both in terms of what the agent is, the quantity, that is the relative strength, which will give you an indication of what you need to be doing, whether it is deadly or not.

One of the difficulties with this piece of equipment, it is designed to connect to a communications vehicle, which will give it communications, satellite communications and back-reach. What we would hope to do is analyze what is on the site and then send it back—if it is biological, send it to, say, the CDC, the Centers for Disease Control, and they would verify it, but that is a secondary verification.

The equipment was not certified. Most of the pieces of equipment individually were, but when you put them all together they did not quite operate the way they should, and that is what the team wrote up, and that is one of the reasons the teams were not certified, but as far as individual people go, they have done the training that was required.

There was some discussion in the report about how they were evaluated. They did an external evaluation where the United States Army sent some teams out and gave them some scenarios after they had received individual training, institutional training, and what we call collective training, where they all get together as a team and train, and as a result of that, the Army said they felt they were ready.

STATUS AND LOCATION OF CIVIL SUPPORT TEAMS

Senator FEINSTEIN. Unless the other gentlemen have a response in addition, let me ask this question. When will the teams be

ready, and how are they going to be geographically deployed when they are?

General DAVIS. I will handle that, if you do not mind, ma'am. We do not know exactly when the teams will be certified. That report—and it has been adopted by the Department of Defense, and the Army and the Guard are working very closely together as a part of a team to make sure that we have all of those requirements met.

The result of that report puts us on two courses of action, number 1, to get the teams certified first and foremost, and so we are working with the Inspector General, we are working with the United States Army, and we are working with some subordinate commands within the United States Army and Department of Defense to see and make a final determination of what needs to be done, what are the next five, six, eight, ten steps that need to take place, and then what do we need to do.

We are in the process of working that out. We have much of our work already done, but there are meetings ongoing, I believe later this week—I want to say Thursday, ma'am, I believe, to continue to work that, so that part will get the teams certified. We are hoping that will get done sometime in the next 60 to 90 days.

Senator FEINSTEIN. And then will the teams be geographically distributed?

General DAVIS. The teams have already been geographically distributed, at least for the first 27 teams, ma'am. We initially received 10 teams for the National Guard. We put those teams in the 10 FEMA regions, the Federal Emergency Management Agency regions around the country, because that is really how we are, at this point at least, designed. The Federal response to anything that happens, we do it by FEMA region.

Those initial 10 teams were put into place, and we used a 150-mile radius of action for deploying those teams. It was very quickly decided that those were not enough teams, because we were not covering enough of the population. Seventeen additional teams were given to the Guard, and through a Department of Defense program they looked at such things as, in locating the next 17 teams, where would they be in relationship to the first 10, the population base they would cover, as they were trying to cover the maximum population for the United States, the geography of getting a team to some of those locations, and so there were about four or five factors that were included.

As a result of these factors being applied, the decision was made on the basing of the second grouping of teams, some 17, and those 17 teams are in the process, they have completed their individual training, a lot of the institutional training, and they are working their way through the collective training.

Of the 17 teams, 12 have completed their training at Fort Leonard Wood, training on the equipment, and then finding out what they need to do. We have two additional teams that are out there now who will wrap up their training at the end of this week, and we have three additional teams. Those have already been decided on in terms of geography.

If I might, ma'am, the next part of this program following certification will be to go out and look at the entire program, what we call a program review, and other things they will look at is, how

many teams do we need in our country, or they will try to make an assessment of that.

There were five additional teams that were allocated last year. It is the department's approach to do this study, comprehensive review of the teams to decide if we have enough teams, do we need more, and where should they go, so these five teams will not be deployed or designated until that study is complete, and that study should be complete about 1 August, ma'am.

Senator FEINSTEIN. Thank you very much. Thanks, Mr. Chairman.

Senator STEVENS. I am glad you asked the questions. We need to keep these things clear as to how we are proceeding. I think this is the most important issue we have with the Department of Defense and the executive branch as a whole, is how can we assist to make sure we have the capability to deal with the potential threat that seems to be increasing as far as weapons of mass destruction. Thank you, Senator.

Gentlemen, General Davis, would you like to summarize your statement?

SUMMARY STATEMENT OF LIEUTENANT GENERAL RUSSELL C. DAVIS

General DAVIS. Mr. Chairman, distinguished members of the committee, I thank you for the opportunity to come and testify before you and make a presentation, very short. We have submitted an official statement for the record, posture statement, but I would like to summarize a few of the things that are going on in the National Guard.

I will talk in general summary about the National Guard and specific programs we do at the national level, and then Major General Schultz on my right will talk to the Army Guard issues, and Major General Weaver on my left will talk to the issues that impact on the Air Guard, and then we will all be prepared to handle any questions you have.

But increasingly, the National Guard is playing a significant role in our national defense, particularly since the drawdown of the active components has started in the early nineties, where they have drawn down in the area of around 38 to 40 percent. The National Guard has played an increasing role with respect to providing forces to the Commanders-in-Chief throughout the world.

As a result of this activity, and our being a force provided to both the United States Army and United States Air Force, our people are very busy. We have increased the tempo with which we operate about 50 percent above what we were doing last year. You talked to some of those issues, and we have some statistics in terms of retention, but we would suggest that we are not—we are not—being overtasked.

We need to look at how we are tasking our folks, and General Schultz will talk to most of those issues, but as we have engaged in activities in peacekeeping in Kosovo and Bosnia, to include last year, where we had the 49th Division over there as the command and control element for Task Force Eagle, some 6,000 people we had over there from 11 different countries, and our two-star Division Commander was in charge of that operation.

For the first time since the Korean War we have had a Guard commander in charge of active Guard and Reserve forces deployed forward, plus the soldiers of 11 nations in that multinational brigade. The Air National Guard has flown missions in Northern Watch and Southern Watch. Their tankers participated in the Allied force, and the airlifters are working on a continuous basis, and so we are very heavily engaged in both the Army Guard and in the Air Guard.

In the Army Guard, as an example, we had our first battery of Patriot missile personnel in Riyadh, and they are being guarded, by the way, by the Minnesota National Guard, those patriot folks from Alabama, and that is kind of a first for us, too, as we deployed forward our combat forces of the National Guard.

While at the same time we are doing this, what we call our Federal mission, taking care of the issues of augmenting the Army and Active Air Force, we are still doing missions at home. We have folks out on the line, bagging sand. Just recently in North Dakota and up in Minnesota as a result of the Red River, and certainly down along the Mississippi River. I happen to have an association with Iowa, and we have had that happen a number of times, and I spent a little time over there myself working issues, but fires, floods, hurricanes, those kinds of issues, the Guard is out there responding.

President Bush said recently that because of the nature of the threat, the National Guard will be used in some different ways than maybe we have been used in the past, and we encourage that and we support that. We will transform our forces to meet whatever challenge is there.

We have done that in the past for 364 years, sir. We have had situations occur where we have had to change the nature of the Guard, from the early days of the muskets to the modern days of Apache Aircraft and Patriot missiles to F–16's, and our first line tankers, KC–135's, but we need to continue to modernize our equipment, and we need to be allocated resources for these new missions, and we talk about resources, it comes in the form of, number 1, perhaps dollars, but as importantly, full-time manning.

We have to have full-time manning, the people to do the job, to take care of the soldiers and airmen and make sure they are paid, to make sure the equipment is kept up to standard between the drill weekends, between those active duty periods when our soldiers and airmen show up. We need to make sure that we continue to modernize that equipment that they have.

Much of the equipment we have, as is true in the active component, was purchased a number of years ago, so we need to add dollars to that. The previous panel talked to modernization. We have got to do that, and recapitalize those assets so we will have first-line assets.

As we become more expeditionary in the Air Force, and as the Army transforms to keep pace with what the active component Army is doing, and allying their forces to remain relevant and ready, we have got some challenges, but we want to continue to serve our communities, our States, and the Nation, and that is what the Guard is for, and that is what we think we can do.

Homeland security, I will talk about that a moment. As that emerges, I would suggest we have been in the homeland security business in the National Guard for 364 years, protecting our country. If we go back to the Nike missile era of the late fifties and the sixties and early seventies, we had that mission in the Army National Guard. Air defense of our continental United States was done by the Air National Guard, so we know we can participate in that mission and be a part of that, and we do not think we have to modify our forces a lot. Certainly we will have to make some modification of them, but we think we can do it.

In the area of counterdrug we have an excellent program where we go out and we interdict drugs as they come into the country, and we work very closely with law enforcement agencies. In the process of that we go to schools and work demand reduction programs to try to teach kids the horrors and pain that is caused by drugs, and we have some programs there.

We have youth programs, and one where we have a science-based program called Star Base, where we go out and emphasize science and mathematics in schools. We have another program we call our Challenge program. It is a 22-week residence program for kids 16 to 18 years old, high school dropouts who have an opportunity to turn their lives around. We have a 6-month program and then there is a year-long mentorship program following that. That is another program that has been excellent, I think, for the country.

We are involved in doing some things in the State partnership program, where we have aligned States in the United States with countries in the former Soviet Union and former Warsaw Pact, and we are working issues with those. It starts as a military program and has expanded in a number of other areas, and we would be happy to talk about that later.

The Reserve Component and Automation System (RCAS) is a true success story. We revamped that program in about 1995 and moved on with that. That is a program for the Army National Guard and the Army Reserve, where we put together programs so that we will be able to more quickly and more ably manage our organizations.

As a result of that program and the infrastructure that was put in place, we have a distance training program, where we are able to go out and train some of our soldiers without them having to come into the armory, or certainly go off to schools, the same thing in the Air Guard, and we have put together about two-thirds of the classrooms that we will need and require for that.

Just in summary, I want to say since Desert Shield and Desert Storm we have increased our operational tempo quite a bit. It is having some impact, but as we look at it statistically, not a significant impact. We are busier this year than we were last year. We are trying to figure out how to do that best.

We are concerned about the length of deployments, and we are working some issues in that arena, but we think we are probably a pretty good force for the Nation because of our cost. We only pay our soldiers and airmen when they show up for work. We have a small cadre of folks who are there full-time.

The last item that I would like to talk about is military construction. We have a number of facilities in the Guard, our quality of

life is where the soldier and the airman works, so that is very key to him or her. We do not have facilities like recreation and child care and that kind of thing, although we are looking at child care, because it has a similar impact on the National Guard.

Our diversity program—we want to make sure that we have opportunities for all of our people—is going very well.

PREPARED STATEMENT

I thank you for the opportunity to make my opening statement, and I would defer to General Schultz.

[The statement follows:]

PREPARED STATEMENT OF LIEUTENANT GENERAL RUSSELL C. DAVIS

NATIONAL GUARD POSTURE STATEMENT FOR FISCAL YEAR 2002

AROUND THE WORLD, THROUGHOUT OUR STATES, WITHIN OUR COMMUNITIES

EXECUTIVE SUMMARY

Today, more than ever before, the National Guard is actively engaged in national defense. Since the drawdown of active component forces in the early 1990's, the National Guard has been a significant provider of forces to the Commanders in Chief around the world. Currently, over half of all Army and Air Force personnel are retained in the reserve components.

In fulfilling this role as a force provider, the National Guard has transformed from an organization designed for mass mobilization in the unlikely event of a major global war to an integral member of the Total Force, actively engaged in peacekeeping and combat operations around the world. When the Texas National Guard sent its 49th Armored Division to Bosnia last year, it marked the first time since the Korean War that a Guard unit had headquarters command over active component soldiers. The Air Guard also works side by side with the active component, as F–16 fighter jets patrol the no-fly zone above Iraq on a daily basis.

In addition to deployments in support of federal missions, the National Guard also plays an important role in each of the states and territories. As part of its unique "dual-mission" responsibilities, Guard units routinely respond to protect life and property in state emergencies such as riots, floods, fires, earthquakes, ice and snowstorms. Homeland Security is an increasingly prominent element of the threat to America's national security.

The National Guard has recently taken significant steps to focus on this important mission as we continue to evolve and remain a ready, capable and relevant force in responding to our national security needs. With the help of the Congress, Department of Defense, Joint Chiefs of Staff, and the Services, the National Guard is building and identifying the tools, the organization, and the unique training requirements to help meet this evolving threat. As future capabilities are identified for Homeland Security requirements, the National Guard is ready to adapt to the evolving needs of our nation.

The National Guard faces many challenges as we begin this new century. As President Bush has recognized, "[a]s threats to America change, [the National Guard's] role will continue to change." Transforming our force structure to meet evolving and emerging threats, modernizing our equipment, allocating limited resources among numerous missions, and attracting and retaining qualified people to serve are formidable challenges. The Army is moving to "lighter" forces; the Air Force has become an "expeditionary" force. The National Guard is adapting, as a total force partner, to support these initiatives. While we continue to evolve in order to meet the needs of the Services, the commanders, and our states and territories, the National Guard will remain relevant and ready to serve our communities, states and nation.

OUR STRATEGIC VISION

National Guard Bureau Vision

To "provide for the common defense" * * * of the nation, the National Guard Bureau provides the leadership and resources required to set the standard for the world's premier reserve force, the National Guard of the United States. Our destiny is to respond to current and future worldwide commitments of the National Security

Strategy with community-based, dedicated citizen-soldiers and airmen; well trained, organized, and supported with state of the art technology and equipment.

This vision provides the framework for the premier reserve force in the world. Providing for the "common defense" requires local, national, and global deployments of military personnel and equipment. When our national interests are threatened, the involvement of citizen-soldiers and airmen insures the full commitment of our Nation.

"For a people who are free, and who mean to remain so, a well-organized and armed militia is their best security." Thomas Jefferson, in his 8th annual message to the Congress, November 8, 1808

CONNECTED WITH AMERICA

National Guard in Our Communities

We are first and foremost an institution of people—soldiers, airmen, civilians, and families. The National Guard is the military face of the nation representing a familiar presence in almost every community in America. Our greatest strength emanates from the diversity of our force—diversity of education, political affiliations, vocations, social and economic status, race, color, creed and age. More Americans connect their vision of the military with the local National Guard than any other service. Guardsmen and women are our neighbors, friends, co-workers and relatives. The professionalism, dedication, and trust of the nation in our military starts with the local Army National Guard armory and the Air National Guard unit. People from all walks of life fill the ranks of the National Guard and, as such, provide a direct connection to over 2,700 local communities across the nation where Guard facilities are located. We share a common conviction and purpose built upon a bedrock set of values: integrity, loyalty, selflessness, compassion, family, dedication, service, and patriotism.

National Guard Serving the States

This community connection brings a unique perspective to the culture of the National Guard making it the prime choice for emerging national priorities like Homeland Security and such core missions as National Missile Defense, countering Weapons of Mass Destruction, Counterdrug support, and support against cyber-terrorism. Commanded by the state governor in peacetime, Guardsmen bring critical skills and resources to bear during state emergencies. Whether fighting forest fires, protecting our communities from the ravages of floods, or assisting local and state civil authorities recover from a terrorist attack, the National Guard is ready and trained to preserve life and protect property.

National Guard Around the World

Since the organization of its oldest units in 1636 in the Massachusetts Bay Colony, the National Guard has participated in every national conflict. The colonial period saw Guard activities largely confined within the nation's borders while later 19th century conflicts found the Guard contributing to the nation's defense both at home and abroad. The first half of the 20th century witnessed the establishment of the modern Army National Guard, with Guard soldiers participating in both World Wars. The Guard's evolution continued in the years following the Second World War with the creation of the Air National Guard. The Guard fought in Korea, Vietnam, and the Gulf war. During the 1990s, the Guard's role dramatically increased to a "Total Force" partner at home and throughout the world.

STRATEGIC INTEGRATION

A Corporate Entity Shaping National Security Solutions

To provide cost-effective, well-trained, and relevant military reserve forces, the National Guard must be a peer participant in the development of national security strategy. The National Guard Bureau is uniquely positioned, in this regard, as a Federal organization that resources and regulates the reserve components (the Army National Guard and the Air National Guard) of two military departments. To be a significant force multiplier in this area, the National Guard Bureau is engaged in the processes that formulate national security strategies as well as national military strategies.

The National Guard Bureau is represented in the Quadrennial Defense Review effort. This effort explores possible national security strategies and their implications on military force structure. Aligning possible strategies against the perceived risk to the nation and identifying financial and force structure implications is essential in building a table of security options for civilian decision makers. By partici-

pating in this process, the National Guard ensures its rich history, traditions, and core competencies will be incorporated into all strategy options.

A Joint Entity Coordinating with the Chairman, Joint Chiefs of Staff, Joint Staff

The National Guard Bureau does not direct the military operations of the Army National Guard or the Air National Guard. However, under Section 10501, Title 10, United State Code, the National Guard Bureau is the channel of communications between the military departments and the 54 states and territories. To ensure timely, complete coordination, the National Guard Bureau staff communicates with the Chairman, Joint Chiefs of Staff, and Joint Staff personnel. Joint training exercises are coordinated to insure the inclusion of Guard personnel and equipment and to maximize the training opportunities for National Guard personnel as full partners in the total force.

The Chief, National Guard Bureau meets periodically with the Chairman, Joint Chiefs of Staff. Members of the National Guard serve full-time on the Joint Staff. Substantive policy issues pertaining to the National Guard are coordinated with the Guard representative to the Chairman, Joint Chiefs of Staff. National Guard members are working in a collective manner throughout the Department of Defense to create a seamless total force.

A Connected Entity Contributing to the Quadrennial Defense Review

The Congress has mandated that we review our defense direction every four years. The review addresses our assessment of the perceived threat, strategies to meet the threat, and the ensuing force structure to implement the strategy. The Department of Defense will use the congressionally mandated Quadrennial Defense Review for 2001 as a tool to help determine our national defense priorities. The role of the National Guard in that review is to be fundamentally supportive of the parent service components in addressing the review. However, there are some parts of the threat that are especially relevant to the National Guard as a state institution.

HOMELAND SECURITY

With respect to Homeland Security, we agree with the April 2000 statement of the U.S. Commission on National Security/21st Century that "The National Guard—successor to the militia, and acknowledged in the Second Amendment as the historic defender of the Republic—must be trained and equipped to assume, among its other responsibilities, a significant role in defending the homeland in the 21st century." The National Guard looks forward to taking part in defining its role in securing the homeland. Although not the only mission of the full spectrum of forces the National Guard provides to our National Security Strategy, the Guard currently supports Homeland Security through its National Missile Defense, Countering Weapons of Mass Destruction and Terrorism, and Counterdrug efforts.

The Army defines Homeland Defense as "Protecting our territory, population and infrastructure at home by: Deterring and defending against foreign and domestic threats. Supporting civil authorities in crisis and consequence management. Helping to ensure the availability, integrity, survivability, and adequacy of critical national assets."

We believe Homeland Security in a National Guard context includes a response to weapons of mass destruction to include biological and chemical agents. We believe it is linked to the air defense and air sovereignty of our nation and protection against the threat of rogue missiles. We would also add countering drugs as a component of the threat to our citizen's security. Protecting information operations is another important facet of this defense.

Homeland Security is a national program that will be executed at the local level. It requires federal funding and national standards, but local administration in a peacetime environment. No one has more experience at interfacing with local and community government agencies than the National Guard. We have had decades of experience coordinating with local responders, and working in interagency environments. The Guard has provided military aid to civil authority on a regular basis, in natural disasters and emergencies all across our nation. The National Guard can use its forward-deployed strengths and its core competencies to best advantage in this mission.

The U.S. Commission on National Security/21st Century report takes a comprehensive look at this vital mission and identifies many areas the Guard can play a major role. The National Guard is a trained, organized, equipped and disciplined force in almost every community in America. That embedded capability offers a large part of the solution to national coverage. This mission will require some additional organization and specialized training and equipment to supplement what is already at hand. We are already making solid progress in that direction with our

Civil Support Teams. Those teams will be deployable assets able to respond across state lines.

The Department of Defense, through the Quadrennial Defense Review of 2001, is working to align its structure, resources and systems to counter these new threats to our homeland. This process must produce deterrent strategies and response capabilities for the best interest of our nation. The National Guard, as a participant in the QDR process, is working closely with the Department of Defense to create cost-effective solutions for Homeland Security.

The National Guard Bureau is positioned to offer solutions that transcend single-service solutions. Quadrennial Defense Review solutions supported by State Adjutants General as well as multiple services will provide workable alternatives. Working to this end, the National Guard remains committed to support and implement full-spectrum solutions to our national security challenges.

Homeland Security is a work in progress—developing a definition, written doctrine, and finding ways to resource this national concern. We know that the Guard will play a significant role. Currently, the National Guard is already heavily involved in missions that constitute the heart of Homeland Security.

National Missile Defense

The end of the Cold War brought a relaxation of tensions between America and the Soviet Union and reduced concerns about nuclear war. Unfortunately, the spread of ballistic missile technology and weapons of mass destruction to new parts of the world has accelerated. The danger posed by this proliferation prompted a shift in objectives for the Strategic Defense Initiative program in early 1991. Keeping with this reorientation, the name of the Strategic Defense Initiative Office was changed to the Ballistic Missile Defense Office in 1993. This organization's goals now include developing systems to defend the United States against limited missile attacks and protecting deployed U.S. forces and American allies against shorter- and mid-range ballistic missiles. The decision to reorient the U.S. missile defense program was validated by the Gulf war, which demonstrated the increasing need for these capabilities.

This year President Bush will determine whether to deploy a limited National Missile Defense (NMD) against ballistic missile threats to the United States from states that threaten international peace and security. The decision will be based on four factors: whether the threat materializes, the status of technology and the proposed system's operational effectiveness; the implications for the overall strategic environment and our arms control objectives; and affordability. The NMD program is currently structured so that an initial capability for defending all 50 states against limited ballistic missile attack could be available in 2005, with expanded capabilities ready in 2006–08.

The National Guard Bureau has established an office cell to support the National Guard's role as the "force provider" for the NMD system. Two states, Alaska and North Dakota, are under consideration for possible fielding of a new missile defense warning and interception facility.

Countering Weapons of Mass Destruction and Terrorism

The unique dual state and federal role of the National Guard sets it apart from any other military organization to fulfill the special requirement of supporting Weapons of Mass Destruction (WMD) emergency responders and consequence management. In this important role, the National Guard is in the process of validating and fielding 32 full-time Civil Support Teams (CSTs) as authorized by Congress. States that do not have these full-time CSTs will have CSTs made up of traditional Guard personnel. These traditional CSTs will receive training and provide a partial response capability. The Guard is also planning additional, relevant training and equipment for other Guard units, which will be used for the reconnaissance of chemical, biological and radiological events, and patient decontamination.

The mission of a CST is to: Assess a chemical, biological, radiological or nuclear event in support of the local incident commander; Advise civilian responders regarding appropriate actions; and Facilitate requests for assistance to expedite arrival of additional state and federal assets to help save lives, prevent human suffering, and mitigate property damage. These teams will respond as a part of a state emergency response, deploy outside the state to assist another state or mobilize in a federal support role.

The National Guard is developing a plan to task organize existing units within each state to form a Joint State Task Force Headquarters for Consequence Management. This headquarters will have responsibility to develop the consequence management annex to a state's emergency response plan. In addition, it will act as the interagency coordinator for conducting community readiness exercises to assess the

state plan. The National Guard has also provided Distance Learning Network time for all emergency responders to receive training. Additional resources must still be focused to more effectively manage and enhance the national and state terrorism response assets identified above. The National Guard will work to assist state and federal agencies in conducting coordinated training and exercises so that we are prepared to respond in the event of terrorist activity in our homeland.

National Guard Counterdrug Program

The National Guard is an organization grounded in hometown America, and each Guardsman and woman knows that our neighborhoods and schools are also battlefields where the struggle is waged one precious life at a time. Our members participate and support a number of proven drug demand reduction programs nationwide that focus on community coalition building, substance abuse education, youth mentoring, anti-drug message broadcasting and distribution, leadership development within vulnerable groups, and the promotion of high standards of citizenship.

In our federal role, we support the Commanders-in-Chief by detecting and monitoring attempts to smuggle narcotics into the United States. Members of the National Guard fly fighter aircraft to identify suspected and known drug smuggling air and sea craft in the Caribbean; collect and report near-real-time narco-trafficking intelligence; provide radar support to the U.S. Customs Service Air and Maritime Interdiction Coordination Center and the Joint SOUTHCOM Surveillance Reconnaissance Operations Center; and provide mechanical and logistics support to contracted radar sites in Colombia and Peru.

Within the United States, the National Guard supports various federal, state and local law enforcement agencies, task forces, and community-based prevention organizations. Law enforcement agencies greatly depend on the National Guard for specialized military equipment and highly trained soldiers and airmen, without which many interdiction operations would cease. During fiscal year 2000 approximately 3,600 soldiers and airmen with skills in foreign languages, intelligence analysis, map-making, communications, engineering, diving, marijuana eradication, transportation, logistics, cargo inspection, and surface and air reconnaissance were involved in counterdrug operations.

The National Guard has established goals and strategies to guide our efforts as we provide support to law enforcement agencies. The first goal is to increase cost effective, guard unique support by increasing the use of specialized or emerging technology, such as military aircraft and thermal imaging devices. The second goal of the National Guard Counterdrug Program is to reduce the drug threat within our communities by increasing the level of support to High Intensity Drug Trafficking Areas, state and local task forces, and local community coalitions. The third goal is to enhance the quality of our workforce by stabilizing the State Plans Budget to support the 4,000 personnel authorized by Congress, and increase the amount of training for counterdrug personnel.

As we move into the new millennium, the National Guard will continue to provide valuable support to various federal, state and local law enforcement agencies, task forces, and community-based prevention organizations in hopes that drug use will continue to decrease.

Preventive Defense

Another federal role of the National Guard is that of Preventive Defense. We are uniquely positioned to promote democratic practices abroad and find ourselves in frequent demand for overseas nation-building programs. Under the auspices of the National Guard's State Partnership Program, National Guard personnel participate in various command sponsored engagements. The National Guard participates in programs such as the North Atlantic Treaty Organization's Partnership for Peace program, European Command's Joint Contact Team Program, Southern Command's Traditional CINC Activities Program, and similar activities sponsored by the Office of the Secretary of Defense, the Joint Staff and the State Department.

National Guard personnel, and the militia system under which they operate, are models for the role of a military in a democratic society. They provide an influential example of how a military force can be effective while demonstrating military subordination to civil authorities and illustrate how a military force of the people remains committed to the people. The wealth of civilian skills our Guard members take overseas—and the diversity of non-military professions they represent—are also important, giving our men and women a versatility and credibility as goodwill ambassadors that no other American military arm can match.

The State Partnership Program

The purpose of the State Partnership program is to build long-standing institutional affiliations and people-to-people relationships with nations currently estab-

lishing democratic military organizations. By using National Guardsmen in their dual roles as citizen-soldiers, the partner nation's military leaders encounter highly trained and cost-effective members of the United States Armed Forces. Guardsmen serve as role models in making a compelling case for the ideals of democracy, professionalism, and deference to civilian authority. They also demonstrate the necessity and economy of Reserve Components with the ability to react immediately to civil and military emergencies.

Much of the Guard's success in promoting democracy abroad is the result of the State Partnership Program. To date, thirty-two states, two territories and the District of Columbia have joined as Partners or Associate Partners in extending the hand of friendship from grassroots America to thirty-two countries that would emulate our ways and institutions. Foreign military personnel and political leaders visit our country to observe how the National Guard operates within the State and Federal framework. National Guard members reciprocate by visiting the partner country and providing detailed information on civil-military topics like search and rescue, medical support, disaster response, military law, and family programs. Importantly, these are more than just military-to military contacts. By involving governors, mayors, and their staffs, state legislators, and the families and friends of our Guardsmen and women in building these bridges of friendship, we promote political "buy-in" on national security strategy at the local level. We also foster cooperation between the federal and state government in other productive ways.

Sharpening the military skills of our Guardsmen and women while demonstrating their ability and willingness to enhance the quality of life for hemispheric neighbors is just one benefit of this timely and innovative engagement. We are firmly committed to sustaining this effort which has our Guardsmen and women helping to shape emerging democracies, and preparing for and improving readiness by engaging in international events and activities, and responding as our national security needs require.

READINESS AND RELEVANCE

Citizens First: Warriors When Called

Citizen involvement in national defense is critical to the longevity and health of democratic government. It is a reinforcing thread in the fabric of democracy itself. How the leadership defines our national security interest, in the end, is validated through the support of the people. Our rich heritage of Guardsmen and women involved in national defense is rapidly taking on new dimensions. As we transform our organization, we must insure that we recognize, respect, and protect our citizens' "commitment to serve." Only by preserving this commitment can we attract the needed personnel to our ranks and retain them in service throughout a productive career.

Preserving the Commitment to Serve

We entrust a tremendous responsibility in our young men and women and are committed to ensure that such trust is not taken for granted. Today's National Guard provides a number of quality of life programs designed to ensure we recruit, train, deploy and retain the quality force our country deserves.

The National Guard is struggling with recruitment and retention issues primarily due to the increasing number of active-duty days required to support contingency operations around the world. Because Guard duty is a second job for most of our personnel, the increasing number of deployments creates unique retention problems with civilian employers. The National Guard has taken steps to retain our personnel through Aviation Continuation Pay and special salary rates for aviators, as well as authorizing special pay and enlistment bonuses for critical specialties.

Recruitment and Retention

Army National Guard: In fiscal year 2000, the ARNG had success in enlisted personnel recruiting and retention, accessing over 100 percent of its goal of 54,034. However, while officer accessions were up 11.8 percent from fiscal year 1999, officer end strength fell 908 officers short of the goal of 38,308. This shortfall was due to a higher than expected loss rate among ARNG officers. The ARNG is working vigorously to identify the reasons for these higher than projected losses by conducting telephonic and mail surveys with departing officers.

The ARNG initiated an accelerated National Guard Bureau (NGB) Officer Candidate School (OCS) Program in 1996 that has proven very successful. This accelerated program cuts 11 months off the traditional OCS course duration—eight weeks versus 13 months. This is particularly beneficial to states experiencing large company-grade officer vacancies. The NGB has been programming about 80 students

per year for the last five years. The class size doubled to 160 students in fiscal year 2001 due to forecasted training requirements submitted by the states.

In addition, Cadet Command authorized 800 Guaranteed Reserve Forces Duty contracts for the Army Reserve Components for fiscal year 2001. This is the first year that Cadet Command has established a separate mission for Reserve Component accessions. The ARNG will receive approximately 500 new accessions from this program.

The ARNG also supports the Army's initiative for Selective Retention Boards that will allow selected captains and majors to be retained so that they may reach 20 years of active service. Further, the ARNG also supports the Army's initiative to select captains for promotion who do not possess a baccalaureate degree or military education certification. The actual promotion to the next higher grade will become effective at such time as the individual provides proof of civilian or military education requirement completion.

Air National Guard: The ANG met its fiscal year 2000 recruiting goal by accessing 11,936 new members. Coupled with fewer losses (10,873), the ANG was able to attain a fiscal year 2000 end strength of 100.1 percent. However, beginning fiscal year 2001 with an increase in congressionally programmed end strength of over 1,300 personnel (106,678 to 108,022), the ANG starts fiscal year 2001 at 98.8 percent. Additionally, the ANG is projecting 11,785 losses for fiscal year 2001, making their recruiting goal an astonishing 13,620.

Full-Time Support

A major strength of the National Guard and its contributions to national defense continues to be the National Guard Technician and Active Guard and Reserve (AGR) programs. The full-time Guard cadre must be a ready and relevant force that is well trained, organized, and equipped with state-of-the-art technology. Also, sufficient numbers of full time personnel must be provided to ensure that the numerous mission requirements and modernization goals can be met. The uniformed members of the Guard's full-time force, including Technician and AGR personnel, continue to be readiness multipliers and an important pillar of support to national, state and local requirements.

Although progress in full-time support has been made, we face challenges in a very competitive marketplace. Full-Time Support personnel are the single most critical readiness enabler, providing stability and institutional knowledge at every level of command. Full-Time Support functions include administrative, payroll, supply, training, maintenance and recruiting support at the unit level. Other functions include AC/RC integration management, and coordination of CINC requirements, mobilization and pre and post mobilization training.

Current and future operations depend on a fully integrated force with the flexibility to respond quickly to meet rapidly changing operational requirements. Additionally, the current frequency and number of operational deployments causes the Army and Air Force to rely to a greater extent on the National Guard to meet its commitments to the National Military Strategy. Full-Time Support personnel are critical links to the interoperability of the National Guard and the active components.

Transforming Our Organization

As we begin the 21st century, the National Guard reflects upon our service over the last hundred years. America entered this century without the ability of powered flight and yet, in little more than 60 years, placed a man on the moon. The National Guard has also undergone dramatic changes over this century. We have transitioned from a force focused on crisis response at home to a full partnership with the active components in defending our national security interests around the world.

Of major concern to the active components is the dramatic increase in operations tempo and deployments. Many Commanders-in-Chief support additional funding and equipment for the National Guard so that the Guard may better assist them in meeting their worldwide operational requirements. Many believe that increased reliance upon Guard and Reserve forces to augment, reinforce, and support missions has become the norm because of personnel reductions in the active components.

Meeting the demands placed on our military in light of available resources is a challenge for the Department of Defense. Today, more than ever, the National Guard is a significant part of the solution. The National Guard is a cost-effective and capable force-multiplier. We provide over half of the Army's combat assets and about 37 percent of the Air Force aircraft for less than 5 percent of the national defense budget. Additionally, over half of Army and Air Force personnel are retained in the reserve components.

Key to our ability to remain a ready and relevant force is obtaining adequate resources to continue our transformation. National Guard priorities include equipment modernization, adequate facilities and recruiting, training, and retaining quality soldiers. Because of the increased reliance on upon Guard and Reserve forces, funding these priorities is essential to ensure America's continued military superiority.

The Army Transformation

The Army is transforming based on the emerging security challenges of the 21st century and the need to respond more rapidly across the full spectrum of operations. As an integral part of the Army, the Army National Guard (ARNG) will transform as well. One ARNG brigade is expected to begin transformation prior to fiscal year 2008. In the current plan, the entire ARNG will transform by fiscal year 2032. Before transformation is complete, the portion of the ARNG not yet transformed will form the Legacy Force. The Legacy Force is the strategic hedge that provides the essential capability to support the National Command Authority and warfighting Commanders In Chief. The active Army will cascade the most modern equipment to the ARNG. Selected legacy formations in both the active and reserve components of the Army will be recapitalized to enhance key armored and aviation systems as well as improve light force survivability. The ARNG Combat Support and Combat Service Support forces will also transform to meet the changing support requirements of the transformed Army.

Expeditionary Air Forces

Last fall the Air Force implemented the most significant change since its inception over fifty years ago—the Expeditionary Air Force (EAF) construct. This change affects the fundamental ways the Air Force organizes, operates, and even relies on the Air National Guard. Under this structure Active, Guard, and Reserve flying and support units are assigned to an AeroSpace Expeditionary Force (AEF). Ten AEFs are organized with the ANG playing a significant role.

By accepting ten percent of the total AEF tasking, the ANG will contribute close to 25 percent of its complete force structure every 15 months. The benefits to this new level of involvement and integration with the Air Force are many. It will bring predictability and stability to our people who must manage family concerns and civilian employment responsibilities. This is truly a great "total force integration" success but it also brings with it some challenges. We must make this a positive experience for all our men and women as well as their families, employers, and communities.

As the Air Force and Department of Defense recently noted in a report to Congress: "Simply stated, the Air Force could not perform its expeditionary mission without the contributions of its Air National Guard and Air Force Reserve forces. They contribute 71 percent of the tactical airlift, 67 percent of the strategic tankers, 62 percent of the strategic airlift, and a significant portion of other Air Force capabilities critical to its expeditionary capability. In addition to providing expeditionary support, the Air Force Reserve is the sole provider of unique capabilities such as aerial spraying and hurricane tracking, while the Air National Guard provides the nation's airborne air defense capability. The seamless integration of the Guard and Reserve into the Total Force is a crucial step toward realizing the full potential of the EAF."

Modernizing Our Equipment

To meet the needs of the new century, the Guard must modernize its equipment. Modern, mission-capable equipment is an essential element to maintaining readiness. State-of-the-art weapons, aircraft, communications, and other equipment are necessary for Guard units to interface and operate seamlessly with their active component counterparts. Although we have come a long way in the last several years in upgrading systems, much still remains to be done.

Army National Guard (ARNG)

The goal of the ARNG modernization strategy is to provide for a compatible and interoperable force. This force will be capable of fulfilling state, national and international missions in war and peace. Providing modern equipment with associated training and logistics support to the ARNG is integral to maintaining the quality force the nation expects.

The Army Transformation announced by Army Chief of Staff General Eric K. Shinseki and briefed to Congress in fiscal year 2000 proposed sweeping changes to aviation force structure. The Transformation will impact ARNG aviation in every state, not only in personnel and aircraft, but also in facility construction and qualification training for aviators and maintainers. Simultaneous with the restructuring, the Army will accelerate the retirement of legacy aircraft (AH–1, OH–58A/C and

UH–1) resulting in the divestiture of the AH–1s in fiscal year 2001 and the OH–58A/Cs and UH–1s in fiscal year 2004. Implementation of the retirement plan within these time frames depends upon transferring older aircraft (AH–64s and UH–60s) from the active Army to the ARNG. The ARNG has proposed limited retention of AH–1s, OH–58s and UH–1s so that valuable aviation personnel skills can be retained pending acquisition of replacement aircraft.

The aging AH–1 and UH–1 fleets have rapidly become an expensive maintenance burden. Long-term modernization plans called for the AH–1 to be replaced by the AH–64A/D Apache Longbow and the UH–1 to be replaced by the UH–60L Blackhawk. The retirement of the UH–1 in fiscal year 2004 may leave the states without sufficient utility aircraft to execute state contingency missions such as disaster relief responding to floods and earthquakes, as well as fire fighting.

Significant fire support modernization initiatives included the M109A6 Paladin, a 155 mm artillery system, the Multiple Launch Rocket System (MLRS) and the Highly Mobile Artillery Rocket Systems (HIMARS). By the end of fiscal year 2001, the ARNG will have 18 Paladin battalions. The ARNG divisional battalions still require Paladin for modernization. The fielding of the HIMARS to the ARNG is tentatively scheduled to begin in fiscal year 2005.

The Javelin is the Army's medium weight manportable Infantry anti-armor weapon system and replaces the Dragon medium anti-tank weapon. The current budget fields the Javelin Command Launch Unit to all of the ARNG's eSBs and Special Forces (SF) Groups. Fielding will begin in fiscal year 2004 and be completed in fiscal year 2006. A second phase of fielding is planned, but is not yet fully funded.

The ARNG is programmed to receive 1,034 M1078 Light Medium Tactical Vehicles (LMTVs) to modernize high priority units. The ARNG will receive the first of 380 LMTVs by the fourth quarter of fiscal year 2001. The next phase will start in fiscal year 2007 and conclude in fiscal year 2008.

M1 Abrams Modernization: Efforts are currently underway to upgrade tanks in the eight eSBs from M1A1s to M1A1AHs and in the non-eSB Guard units from the 105 mm equipped M1 tank to the 120 mm M1A1. This will provide armor units with greatly increased firepower and survivability while eliminating ammunition compatibility issues with the rest of the Army.

Bradley Fighting Vehicle Modernization: Congress appropriated money in fiscal year 1999 for the procurement of the M2A2ODS Bradley Infantry Fighting Vehicle (BIFV) for the ARNG. This initiative, along with the cascade of older Bradleys into ARNG Divisions, will assist the Guard in moving along in its modernization strategy to ultimately have a pure fleet of BIFVs.

The ARNG has assumed the corps level air defense artillery role with the activation of nine Avenger battalions. All nine corps Avenger battalions are fully fielded with the weapon system. The remaining eight corps Avenger battalions will be fielded with the Forward Area Air Defense Command, Control and Intelligence System and Sentinel radars from fiscal year 2001 through fiscal year 2003.

The continued fielding of Single Channel Ground Airborne Radio System (SINCGARS) radios is a key component in interoperability with the Army. The fielding plan window runs from June 2000 through June 2004 for all eSBs, ARNG divisions and remaining units. Currently ten eSBs are equipped with SINCGARS and the remaining five are scheduled to receive them by June 2001. In addition, echelons above division, field artillery brigades and air defense units, which support early deploying forces, are receiving SINCGARS SIP radios.

The Army Battle Command System (ABCS) is The Army's architecture for the overall integration of the digital command and control system found at all echelons from theater level to the weapons platform. Currently, ARNG units assigned to III Corps will receive the required ABCS applications by fiscal year 2004. However, to make the ABCS applications inter-operable and functional, units will require a digital pipeline, such as the Enhanced Position Location Reporting System. Funding to support digitization of the eSB and ARNG divisions does not currently exist.

The Reserve Component Automation System (RCAS) is an automated information system that provides the Army the capability to administer, manage, and mobilize Army Guard and Reserve forces more effectively. The RCAS provides an integrated capability between the ARNG and the USAR that supports mobilization and improves day-to-day administration and management of Reserve and Guard forces. Fully deployed, RCAS will link approximately 10,500 Guard and Reserve units at approximately 4,000 sites located in all 54 states, territories, and the District of Columbia.

RCAS has already been used to communicate with soldiers in Bosnia and to respond to disasters such as Midwest floods, Northeast ice storms, and El Niño storms on the West Coast and hurricanes in the Southeast. Full functionality is expected in fiscal year 2002.

The National Guard Distributive Training Technology Project (DTTP) represents the future of training and education in the Army National Guard. This award winning program converts space into high tech classrooms linked via state of the art telecommunications to a centralized training and teleconference facility, resulting in a fully interactive classroom where both military and civilian studies can be conducted. The project spans 15 time zones and impacts over 3,000 communities.

Collaboration between organizations, e.g., federal, state, public, private, is ongoing to establish partnerships focused on fully implementing the program's potential for extending educational venues into communities across the country. Under this "shared use" approach, classroom facilities are made available to non-military organizations on a direct cost reimbursement basis. The synergistic effect of this approach is the expansion of access to automated information and communications capabilities across the nation, while at the same time helping to defray the cost of operating the system. The eventual impact on improved mobilization readiness and community access is expected to be substantial.

Air National Guard (ANG)

A critical investment in readiness is required to achieve full Expeditionary Air Force core combat capability.

Precision Strike: Precision Attack Targeting System (PATS), Global Positioning System (GPS), High Speed Anti-Radiation Missile (HARM) Targeting System (HTS) 24-hour Operations: Night Vision Goggles (NVG) and Night Vision Imaging System (NVIS).

Survival in a Complex Threat Environment: Countermeasure Management System (CMS), Towed Radio Frequency (RF) Decoys, and Pylon Integrated Dispensing System (PIDS) Universal.

Information Dominance: Situation Awareness Data Link (SADL), Fighter Data Link (FDL), Theater Airborne Reconnaissance System (TARS), and Improved Data Modem (IDM).

These ANG core combat capabilities integrate directly into the Air Force's core competencies for providing Aerospace Superiority, Global Attack, Rapid Global Mobility, Precision Engagement, Information Superiority, and Agile Combat Support. Together, they provide the most rapid and effective way to achieve national objectives while also reducing risk to the men and women serving our nation.

In addition to acquiring new, state of the art systems like the F–22, C–17, and C–130J model aircraft, modernization requirements also require us to focus on collateral supporting programs and equipment. These programs include: the Combat Upgrade Plan Integration Details (CUPID) program adding GPS, CMS, NVIS and SADL to our F–16, Block 25/30 aircraft; upgrading our KC–135E fleet through the Pacer Compass, Radar and Global Positioning System (CRAG) program and the re-engining program; service life extension modifications for the remaining C–141Cs to sustain their flying until the C–17 transition is complete; and the C–130X program to bring all C–130E, H1, H2 and H3 variants to the same basic aircraft avionics and systems configuration to increase their reliability, maintainability, supportability, and performance.

We face a future of changing training requirements driven by a growing reliance on precision-guided, stand-off weapons and night operations for all airspace users. Further, we will be training in the evolving environment of a re-designed National Airspace System. We must ensure access to the training space we need, and provide our crews with realistic training—in a more complex aviation environment.

The Air National Guard seeks to ensure that its attack assets will have the latest and best in precision attack capability and battlefield information equipment. Our objectives are to ensure all ANG aircraft have the latest, best, defensive and all weather equipment. Modernization of all our aircraft, C–130s, KC–135s, C–5s, F–16s, F–15s, A/OA–10s, HH–60s and others, requires adequate and timely funding for replacement parts, enhancements, and "mid-life" upgrades for our weapon systems. Equipment modernization is essential for a relevant Air National Guard.

Military Construction

Investment in military construction and real property maintenance will also enhance our readiness capabilities. The National Guard currently operates and maintains approximately 3,200 facilities in more than 2,700 communities. The Guard has facilities in all 50 States; the District of Columbia; and in the three territories of Guam, Puerto Rico, and the Virgin Islands. Quality of life, and more important to reserve component members, quality of service is directly impacted by the facilities in which they serve.

Their replacement value exceeded $30 billion in fiscal year 2000. The number of facilities has increased in recent years because of new missions and the Base Re-

alignment and Closure process. While the inventory has grown, military construction funding has not kept pace with estimated requirements. More than half of the facilities need replacement or extensive renovation because of their age or condition.

The ARNG and ANG submit construction requirements separate from the Army and Air Force and compete directly with the active duty forces for military construction dollars. In the end, the ARNG and ANG receive only a fraction of the total military construction program in the President's Budget. Traditionally, Congress has inserted military construction projects into the budget process. However, even with the congressional add-ons, the National Guard has traditionally been able to fund less than half of its validated requirements.

Military construction for the Guard is much more than just putting up new structures. The facilities that house the Guard represent to us what a post or base represents for our active counterparts. It is the headquarters, the aircraft hangars, the motor pool, the mobilization station, the classroom, the family support group gathering place and is a significant quality of life issue for our people. The poor condition of National Guard facilities affects training, recruiting and retention. Our goal will be to communicate this message to our elected and appointed leaders so that they too can develop an appreciation for this vital issue.

Fiscal year 2000 and fiscal year 2001 saw a number of much needed Army National Guard military construction (MILCON) projects initiated throughout the nation. However, much still needs to be done.

In fiscal year 2001 the ARNG completes the Real Property Development Plan (RPDP) Initiative as part of a rigorous and disciplined process using Army standards to establish priorities for MILCON requirements. This planning tool provides states with a decision-making guide for long range acquisition, utilization and development of real property. In addition, the ARNG plans to complete incorporating our facility needs into the Standard Army Systems by the end of 2002 to provide the Department of the Army a more accurate view of what type and how many facilities the ARNG needs to successfully complete its missions.

The Air National Guard had record setting years for MILCON in fiscal year 1999 and fiscal year 2000 with nearly $450 million in projects to address environmental concerns, beddown new missions, replace outdated and inefficient facilities and restore failing infrastructure. Strong Congressional support of ANG requirements made this possible.

This support will be desperately needed in the future as we continue to struggle with a constrained Air Force program. Both real property maintenance (RPM) and MILCON have been cut to make room for other high priority modernization initiatives. The relatively small amounts set aside for MILCON for the ANG will be dedicated to beddown of our new missions (C–17, C–130J, KC–135). If past trends continue, backlogs in current mission requirements, both RPM and MILCON, will continue to grow beyond the $1 billion mark.

Employer Support of the Guard and Reserve (ESGR)

The National Guard has dedicated this year as the Year of the Employer. We have long recognized that without the dedicated patriots who employ our Guardsmen and women, our militia could not perform at the magnificent level we see today. Our soldiers and airmen sacrifice when they answer the call to duty, and in a parallel manner, so do the employers of these soldiers and airmen.

To foster employer-Guard partnerships, the National Committee for Employer Support of the Guard and Reserve (NCESGR) was chartered by presidential proclamation in 1972 under the Office of the Secretary of Defense. It is the sole agency within Department of Defense directed to "promote public and private understanding of the National Guard and Reserve in order to gain employer and community support to ensure the availability and readiness of National Guard and Reserve forces." NCESGR has 54 state-level employer support committees, comprised of over 4,200 volunteer members and is supported by a small joint service staff in Washington. The volunteers implement a variety of programs and services for both reserve component members and their employers. They provide information on employment rights and responsibilities related to the performance of military duty; offer informal employment conflict mediation; and conduct employer recognition and public affairs events that promote understanding of the vital role of the reserve components.

National Guard Family Programs

Support of National Guard families is a critical component of readiness and retention. The National Guard Family Program provides an extensive infrastructure with a national network linking over 2,700 communities within the 54 states and territories. This network includes 54 full-time State Family Program Coordinators who

work with military points of contact and volunteers at every organizational level. This team promotes family member volunteerism, family readiness groups and networks, and quality of life issues, and facilitates family readiness training throughout the National Guard.

During periods of increased Guard activity, such as deployments and state emergencies, Family Assistance Centers are set up to support the immediate and post deployment needs of families. Family Program services include basic family readiness training and counseling in preparation for the deployment of military family members; information, referral, and follow-up; community involvement; emergency assistance; crisis intervention; reunion preparation and activities; and youth outreach programs for children of Guard personnel. A key National Guard quality of life goal is to provide assistance to all military families, regardless of branch or component, who find themselves beyond the support capability of active duty military facilities or their home units.

Youth Programs

Consonant with its role in local communities and state mission, the National Guard operates two youth programs, ChalleNGe and Starbase. These programs make use of the National Guard's strengths in organization, planning, execution, self-discipline and leadership and leverages its existing infrastructure in the states, so that there is great value added with a minimum of additional resources.

ChalleNGe is a program for youth between 16 and 18 years of age who are not in trouble with the law and are drug free, unemployed, and have dropped out of high school. The program consists of a five-month residential phase and a one-year post-residential mentoring phase. Its goal is to significantly improve the life skills and employment potential of these youth through military-based training.

Starbase is a nonresidential program for students in grades K–12, which targets "at risk" students, and provides instruction specifically designed to meet a state's math and science objectives. The program provides the students with real-world applications of math and science through experiential learning, simulations, and experiments in aviation and space related fields.

ON GUARD FOR THE 21ST CENTURY

During the past 365 years, the National Guard has built a distinguished record of service, and will continue to provide the primary first line ready reserve force for our national defense. The National Guard is a reliable insurance policy for national defense that pays daily dividends in our communities and states. It provides the social connective tissue between hometown America and our national security strategy, bonding the support of our citizens to our leadership objectives. The Guard has flexibly adapted to centuries of growth, challenge, and change—transforming to meet the challenge of the time.

As we move into the 21st Century, Americans enjoy relative peace at home and one of the longest economic expansions in our nation's history. Truly, these are blessed times for the majority of Americans. But we must maintain our vigilance, and we must maintain the necessary level of readiness to counter threats to our nation.

As time passes, be assured the National Guard will continue to be engaged globally as full partners with the Army and the Air Force in discharging missions under the National Security Strategy. We will continue to pursue innovations in strategy, training and technology. We will continue to adapt to meet the national security requirements of the time in order to remain the world's premier reserve force.

The National Guard is connected to the American people through 3,200 training centers in 2,700 communities throughout 54 states and territories. To have a strong common defense, all Americans must feel connected to the armed forces. The National Guard is that mechanism which involves local citizens in meaningful community service and allows them to serve their nation while remaining in their communities.

The National Guard is unique in the world. No other military organization has a constitutionally based dual responsibility to state and nation. No other military organization is community based, providing combat ready, mission-capable forces throughout the entire spectrum of conflict. The National Guard is deployed around the world, throughout our states and within our communities.

Senator STEVENS. General Schultz.

STATEMENT OF MAJOR GENERAL ROGER C. SCHULTZ, DIRECTOR, ARMY NATIONAL GUARD, DEPARTMENT OF THE ARMY

General SCHULTZ. Thank you, Mr. Chairman, and distinguished committee members. On behalf of 350,000 soldiers today, I extend my appreciation to you for what you have done for us by focusing on our priorities in the past.

I am here today to tell you it has made a difference, and it continues. As we talk today, we have 14,900 soldiers from the Army Guard deployed from their homes. Two thousand, one hundred are deployed in the Balkans and in Southwest Asia. The rest are on training missions and operational kinds of exercises. My message is this, as we talk about increased deployment, meaning a person away from their place of work or their home, we applied more pressure on our full-time staff.

We have worked with your committee in the past. I am here today to continue to ask for your support of full-time manning as we talk about a changing role in the schedule, really the activity, that we apply across the Guard today. We responded last year, for example, to 512 missions in support of the Army. We were in 64 countries last year. We have been in 57 countries already this year.

So my request today, Mr. Chairman, is twofold: One, assist us with our full-time manning requirements. That is, the personnel looking after the readiness of that unit. The second, modernization of our equipment. As we rely on Guard units to respond more and more every day, deploying with our active units, we need things like radios that talk to one another, and equipment that is compatible across the systems that are delivered in our unit inventory.

Mr. Chairman, thank you.

[The statement follows:]

PREPARED STATEMENT OF MAJOR GENERAL ROGER C. SCHULTZ

Mr. Chairman, distinguished members of this committee, thank you for the opportunity to testify on behalf of the more than 351,000 men and women serving in the Army National Guard. Your Army National Guard today is fully engaged around the world as an integral part of the Army, as well as responding to the call to protect life and property in state emergencies.

Recent events have demonstrated, now more than ever, the crucial role the Army National Guard plays when called upon by our nation during times of need. We were there to help friends and neighbors weather floods, fires, ice and snowstorms. We were also there when our nation asked us to help keep peace in a war weary region. When called, the Army National Guard has proven it can be relied upon.

Fiscal year 2000 brought many opportunities to our organization. We saw the 49th Armored Division Headquarters of the Texas Army National Guard deploy and command a multi-national force in Bosnia. We look forward to the 29th Infantry Division of the Virginia Army National Guard assuming this responsibility in October of this year. Currently, the 48th Infantry Brigade of Georgia Army National Guard is providing security forces for stabilization operations. As I sit before you today, we have more soldiers deployed on Presidential call up orders than at anytime since the Persian Gulf War. At home in fiscal year 2000, ARNG soldiers spent a total of 212,896 man-days in support of state missions. As of May 1st of this year, the number of man-days is 45,127.

The reasons for our success are clear—the people of our Guard family. The Army National Guard is a team of people from every state, territory, and the District of Columbia. These soldiers have personal lives to lead, families to support, and careers to pursue in the civilian sector. In addition, we not only ask our service members to be available for regularly scheduled duty, but also to support an increased operational tempo. Soldiers are our most precious resource. They need our assistance to balance their personal, professional, and military lives.

The Army National Guard surpassed its recruiting goals in fiscal year 2000 in spite of difficult recruiting challenges brought about by a robust economy and we

are on track to surpass our goals for fiscal year 2001. When soldiers join the Guard, they know their talents and abilities are going to be fully utilized, they know they are going to work and work hard. We owe it to them to fight for the highest quality training, state of the art equipment, sufficient numbers of dedicated full-time support staff and appropriate resources for support of the missions we assign them.

The Army National Guard plays an increasingly significant role in the National Military Strategy, now aligned even more closely with Active Component forces. Fulfilling our obligation to this strategy and ensuring we are ready when called upon is paramount. This close relationship with active forces makes concerns about our aging equipment even more worrisome. The Guard must modernize at rate commensurate with the active force. As the active Army transforms, so too must the Guard. The increased reliance on the Army National Guard and its soldiers places an even higher priority on the inter-operability of our equipment.

At this time I would like to submit our annual Posture Statement to the committee in support of my testimony here today. This Posture Statement will provide you with an update on what the Army National Guard has been doing, the progress we are making and how we will help meet the needs of the country as defined in the National Military Strategy. Some of the major issues addressed are equipment modernization, operational tempo, readiness, full-time manning, and transformation. Additionally, we outline the many challenges we face as an organization. We particularly focus on our ability to balance requirements placed upon us by our states and nation and still maintain the support of our families and employers versus our ability to sustain acceptable readiness. The strides made by the Army National Guard are evidenced by the performance of our units. Our foundation is first-rate individual soldiers, molded into teams. These soldiers and teams are what make the Army National Guard a very special organization indeed.

Of course, the bottom line for us will remain the readiness of our soldiers and our units. Mr. Chairman, again I would like to thank you for the opportunity to appear before you today and thank you for the support this committee provides. I look forward to answering any questions you might have.

ARMY NATIONAL GUARD FISCAL YEAR 2002 POSTURE STATEMENT

FORWARD

The 2002 Army National Guard (ARNG) Posture Statement highlights our activities of the past year, and the Army Guard's programs and challenges to meet the needs of our nation in the coming year and beyond.

The ARNG vision is: "A force missioned across the spectrum of contingencies, structured and resourced to accomplish its mission, capable and accessible when called, with trained citizen-soldiers committed to preserving the timeless traditions and values of service to our nation and communities." With a unique federal and state mission, the Army National Guard is poised to respond when our nation or communities call. As a forward thinking organization, the ARNG is mindful of the needs of our fellow citizens whom we serve.

Unprecedented Involvement

The Fiscal Year 2002 Posture Statement tells of unprecedented involvement of the ARNG in both federal missions and in civil support matters. The 49th Armored Division's (Texas ARNG) assumption of multi-national ground forces command responsibilities in Bosnia highlighted an eventful year that saw record numbers of Guard soldiers deployed worldwide in support of the federal mission. In addition, six more ARNG division headquarters were alerted for future Bosnia missions. Continued pursuit of new mission requirements to serve in the areas of Weapons of Mass Destruction and Information Operations ensures that the capabilities of the ARNG will advance with the needs of the nation. A challenging year with Y2K concerns, wild fires, winter storms and other natural disasters provided many opportunities to demonstrate the value of the ARNG at home.

Looking to the future, it is imperative that the ARNG continues to work closely with The Army to balance manning, modernization, missioning and resourcing issues. The relationship with The Army continues to develop and prosper, and it is essential to continue this to ensure ARNG plans and programs are firmly rooted in protecting the present and preparing for the future.

Significant Challenges

Significant challenges for the future are as follows:

Manning.—Our most critical issue is full-time manning. In order to remain a trained and ready force, ARNG units must have sufficient full-time support per-

sonnel. The Army Guard's current full-time manning level of 57 percent of validated requirements is the lowest of all the reserve components. With the Guard's increased role in worldwide day-to-day operations, it is extremely important to have sufficient full-time soldiers ready to help their units meet current readiness operational tempo needs. Maintaining and sustaining personnel readiness in our units is a high priority. Continued support to recruiting and retention is paramount. The ARNG continues to achieve its endstrength mission.

Missioning.—This past year The Chief of Staff of the Army (CSA) announced his intent to mission ARNG divisions and create affiliations with Active Army forces. The Army also supported a change to the Joint Strategic Capabilities Plan, recommending the single apportionment of all 15 enhanced Separate Brigades and the apportionment of six ARNG divisions to a combatant command. The CSA further aligned all ARNG combat maneuver forces to one of the four Army corps, enhancing mission focus. This initiative enhances the understanding that we must remain on the same technological level with active forces to ensure full interoperability and integration.

Modernization.—The Army National Guard is committed to the Chief of Staff's vision of transforming The Army to better meet the demands of the 21st century. Our challenge during this period of Transformation will be to ensure that ARNG units are equipped and sustained at levels that provide them with the capability to execute their missions. Under the current Army plan, the ARNG will complete its Transformation in the year 2030. It is therefore essential that we remain vigilant in addressing critical current force modernization shortfalls in aviation, armored fighting vehicles, artillery platforms and support systems. To execute full spectrum operations in support of the National Military Strategy, Joint Strategic Capabilities Plan and the unified combatant commands, The Army must establish interoperability across the entire force. It is therefore essential that the ARNG acquire the requisite digital equipment capabilities needed to maintain command, control and situational awareness throughout the force.

Resourcing and Civil Support

Resourcing.—The Army National Guard is fully engaged with the Department of the Army to ensure critical resourcing needs are met. Although much progress has been made in achieving satisfactory funding levels in the past, certain critical shortfalls remain. Proper resourcing is essential to meeting readiness targets and particularly critical for full-time manning, recruiting and retention, schools and special training, and automation.

Civil Support.—At the request of a state's governor the Guard is poised to respond to emergencies. We aid state agencies and our communities in minimizing the effects of floods, fires, hurricanes and other natural disasters. We must stay prepared to aid communities when there is a threat of civil disturbances. It is also necessary for the Guard to be ready to help civil authorities mitigate the effects of weapons of mass destruction.

Infrastructure

Infrastructure.—The ARNG maintains 3,174 training facilities. To many communities, these are more than just military buildings. They are meeting places as well as places for community members to come together and share common interests. These structures must be maintained and have full-time manning in the units to keep them open. The ARNG is also one of the greatest stewards for preservation of public lands. Our training areas across the nation are an important part of area eco-systems and contribute to local economic development.

As you read this posture statement, keep in mind the ARNG's unique dual mission. A mission built upon the foundation of full-time manning, missioning, resourcing, infrastructure, modernization and civil support. Since 1636, we have proudly served the defense of our nation. Today and in the future, we continue to assist our communities, and stand ready to defend our nation. With your continued support, we will meet and exceed our nation's expectations.

THE GUARD TODAY

The Army National Guard in Stability and Support for Contingency Operations

Fiscal year 2000 saw an increase in Army National Guard (ARNG) support for contingency operations in the Balkans and Southwest Asia. During the course of the year, 2,932 ARNG soldiers supported efforts under the auspices of OPERATION JOINT FORGE (Bosnia), OPERATION JOINT GUARDIAN (Kosovo) and OPERATION DESERT SPRING (Kuwait/Saudi Arabia).

Operations in fiscal year 2001 are dramatically illustrating the increasing role of the ARNG in supporting theater Commanders In Chief (CINCs) in stability and sup-

port operations. To date, the ARNG has provided approximately 5,400 soldiers in fiscal year 2001, which is an increase of 2,500 soldiers from fiscal year 2000.

During fiscal year 2000, the ARNG deployed more than 22,000 soldiers under the Overseas Deployment for Training (ODT) program in support of CINCs.

Military Support to Civil Authorities

In addition to ARNG deployments in support of federal missions, the ARNG fulfills an extensive and highly visible domestic role. As part of its unique "dual-mission" responsibilities, the ARNG routinely responds to domestic requirements within each state. Local governments in 50 states, three territories and the District of Columbia requested emergency support through their state governments 288 times in fiscal year 2000.

The ARNG provided 200,590 soldier man-days in response to these requirements in an effort to lessen suffering and meet crucial support needs in local communities. Services provided by the ARNG in support of state requirements included establishing security, providing electrical power, heat, water, transportation services, food and shelter. The ARNG provided emergency engineering support to victims of numerous natural disasters, including floods, hurricanes, droughts, ice storms, tornadoes and search and rescue.

U.S. Joint Forces Command Exercises

Beginning in fiscal year 2001, nearly 850 service members are scheduled to participate in Joint Forces Command exercises such as Joint Task Force Exercises (JTFEX) Unified Endeavor and Northern Viking Iceland. This will mark the first time ARNG troops have participated in a major role in Category 2 (multi-service) and 3 (joint force) type exercises. This participation improves the ARNG soldiering skills in joint interoperability and positions our units for higher levels of readiness.

National Guard State Partnership Program

Embedded within the support to U.S. European Command (EUCOM), U.S. Central Command (CENTCOM), U.S. Southern Command (SOUTHCOM) and U.S. Pacific Command (PACOM) were activities conducted under the State Partnership Program initiative. This National Guard program grew from the Partnership for Peace initiative to assist nations emerging from the Soviet Union in establishing a defense infrastructure. Today 32 states, two territories and the District of Columbia are partnered with 32 countries around the world.

Through its cooperative efforts with other nations, the Guard plays an important role in shaping the international environment in support of the national security strategy. The National Guard's international initiatives directly support United States national security and national military strategies by fostering democracy, encouraging free market economies and promoting regional cooperation and stability.

The state partners actively participate in a host of engagement activities, including bilateral training and familiarization events, fellowship-style internships and civic leader visits. These deployments provide valuable training for the ARNG, reduce Active Component Operational Tempo (OPTEMPO) and assist the Unified Commands in shaping the security environment.

PREPARING FOR THE FUTURE

Current world globalization trends, which include rapid and unrestricted flow of information, present an uncertain security environment for the future. We must provide our soldiers with the resources they need to remain trained and ready. The Army National Guard (ARNG) must anticipate the requirements of today's world while we plan for tomorrow's challenges.

The ARNG will have a primary role in supporting emerging civil support missions, including such diverse tasks as managing the consequences of Weapons of Mass Destruction, National Missile Defense System and threats to our nation.

Organizational Goals

To focus our efforts, we have defined 11 key organizational goals that are critical to our support of the nation's defense. These are:

Manning.—Develop and execute an Army-wide integrated human resource system to acquire, distribute, manage, compensate, retain and transition people, enabling the ARNG to provide combat ready units.

Organizing.—Provide the maximum possible number of missioned ARNG units based on the Total Army Analysis (TAA) process, with required support as part of The Army's total force structure required to achieve directed capabilities.

Equipping.—Obtain and distribute mission capable equipment to optimize ARNG unit readiness, modernization and force relevance.

Readiness.—Ensure all ARNG units are resourced to attain and sustain readiness levels needed to meet Commander in Chief (CINC) mission requirements and deployment timelines.

Sustaining.—Provide appropriate and efficient support for personnel, equipment and operations to accomplish all ARNG missions.

Training.—Produce ready units to meet the National Military Strategy. This requires the development of strategies and the planning, acquisition, distribution and execution of resources to train individual, leader and collective tasks in the live, virtual and constructive environments.

Quality Installations.—Provide state-of-the-art, environmentally sound, community-based power projection platforms that integrate all functions required to sustain and enhance unit readiness and community support.

Missioning.—Ensure 100 percent of all ARNG force structure federally missioned—all Modified Table of Organization and Equipment (MTOE) units and Table of Distribution and Allowances (TDA) structure included within Time Phase Force Deployment Data (TPFDD) or supporting the Commander in Chief (CINC) war plans.

Quality of Life.—Provide an environment and culture that promotes equal opportunity for all, fosters environmental stewardship and provides for the safety, health and fitness of the force, families and communities.

Knowledge Infrastructure.—Develop the infrastructure necessary to capture and create information and knowledge, store it in an organized manner, improve it, clarify it and make it accessible in a usable format to anyone who needs it.

Resourcing.—Secure resources for all statutory and critical requirements. Achieve parity within each force package across all components to provide trained and deployable forces for The Army and CINCs.

Army National Guard Vision 2010

No successful plan to shape our future military forces can be completed without a thorough understanding of the global environment. The Army National Guard Vision 2010 provides the foundation for determining our future roles and missions in support of our nation's security strategy. The Army National Guard Posture Statement documents the link between Army Vision 2010, The Army Transformation Campaign Plan and the Joint Staff Joint Vision 2020. These integrated planning documents provide the ARNG direction for meeting its goals, objectives, missions and responsibilities in the new millennium.

In fulfilling its role as a part of this integrated road map to the future, Army National Guard Vision 2010 notes that the development of a full spectrum land force will be a major factor in meeting our long-term readiness objectives. The Army's Transformation Strategy and the missioning of our combat divisions support these objectives. To continue on our current path of success in Active Component/Reserve Component (AC/RC) integration, the ARNG will participate in The Army's Transformation and form an Interim Brigade Combat Team (IBCT) prior to 2008.

Our existing and transformed forces must possess an unprecedented degree of operational and strategic flexibility, allowing ARNG soldiers to fulfill a wide variety of mission requirements. With capabilities ranging from sustained, high intensity combat to the conduct of disaster relief and assistance operations, this full spectrum land force will draw on traditional ARNG strengths as well as a variety of new capabilities in meeting the nation's military and civil needs.

Recognizing the need for both traditional and non-traditional capabilities in the years ahead, Army National Guard Vision 2010 notes that the ARNG's heritage as a community-based force will play a crucial role in meeting these challenges. From 2,679 communities in all 50 states, three territories and the District of Columbia, the ARNG's 350,000 personnel are well positioned to meet both existing and emerging state and federal mission requirements. These diverse capabilities ranging from Combat to Combat Service Support (CSS) combine with the Guard's community orientation to provide unparalleled capability and responsiveness both at home and abroad. The attributes of the ARNG, coupled with rapidly emerging capabilities, will make the Army National Guard Vision 2010 a reality.

The Future is People

The well-being of our soldiers, families, and employers is vital in meeting future challenges. Although we recruit soldiers, we recognize the significant contributions made by their families and employers. This transcends our traditional view of part-time citizen soldiers. Men and women of the ARNG, supported by their families, are the bedrock upon which the organization is founded. Continuing nationwide support from ARNG employers also plays a significant role in the readiness and availability of our soldiers for any mission. Without this employer support, our readiness is ad-

versely affected at every level. Working together, ARNG members, families and employers create the basis for what counts most—our readiness.

Army Personnel Transformation Plan

Lessons learned from Desert Shield/Desert Storm demonstrate that The Army must provide more timely information to commanders to support their soldiers during times of war. We must change our business processes to support soldiers no matter where they serve.

With the increased participation of reserve components during war as well as peacekeeping missions, our systems of providing information must be more uniform, accurate and timely. The vision for personnel transformation is to create a system that is simple, accurate and accessible. This system will give commanders, regardless of component, the ability to manage and support all of their soldiers' needs.

The concept of personnel and human resource support calls for a plan that closely matches The Army Transformation Plan. Key to achieving the vision of Army human resource support is a single, integrated (multi-component) human resource database, referred to as the Integrated Total Army Personnel Database (ITAPDB). Also important to the success of this concept is the redesign of more than 1,170 personnel tasks and functions required to support soldiers, commanders and family members.

A structured plan that contains the personnel manpower requirements must be developed insuring that soldiers, civilians and contractors are trained to work as personnel experts in the more complex future.

The personnel support concept of the future lessens the burden of personnel service support organizations and manpower on strategic lift and sustainment requirements, as well as demands on Army manpower. The new design and concept of support will not only simplify the current complex delivery systems of support and improve access to information for commanders and soldiers, but will also offer improvements in the overall quality of human resource support to soldiers and family members.

The Army QDR Strategy

The ARNG is a full partner in the Quadrennial Defense Review (QDR) process with the United States Army Reserve (USAR) and the Active Component. The Army's approach is to conduct a strategy-based review to achieve low to moderate risk in accordance with the congressional mandate. The process will first assess The Army's capabilities as part of a joint force in meeting the current National Military Strategy (NMS), then look at possible alternative strategies and their implication for required capabilities.

We are also looking at a range of possible alternatives identified in the process to determine the requirements for the ARNG in its unique role as the nation's dual missioned force. We are working closely with The Army to ensure the ARNG's capabilities are identified and recognized by the Office of the Secretary of Defense (OSD), the Joint Staff, combatant commanders and other services through the QDR process.

A successful outcome of the QDR process for the ARNG will include the following:

—A formal recognition of past and future contributions and continued relevance to the full spectrum of operations in executing our NMS.

—All of our force structure fully missioned and resourced to execute the NMS.

—The end strength of the ARNG adjusted to our force structure allowance to allow the attainment and sustainment of the readiness requirements of the CINCs.

—A force structure rules of allocation policy be developed among the components of The Army optimizing the stewardship of limited resources available with the least amount of risk in meeting the CINC's requirements.

—A Reserve Component (RC) rotation duration and frequency policy be developed that provides the least amount of impact to employers and families yet provides CINC required capability and relief to the AC deployment tempo.

—The Army's missions and role in Civil Support be defined.

MISSIONING THE GUARD

The missioning goal of the Army National Guard (ARNG) is to have all ARNG force structure federally missioned—Modified Table of Organization and Equipment (MTOE) units and Table of Distribution and Allowances (TDA) structure included within Time Phase Force Deployment Data (TPFDD) or supporting the Commander in Chief (CINC) war plans.

As our organization enters the new century, the ARNG, both at home and abroad, finds itself doing more than it has at any time previously in its peacetime history.

We provide Partnership for Peace activities in Eastern Europe and humanitarian relief efforts in Central America. We provide units for peacekeeping missions in Bosnia and Kosovo as well as force protection in Southwest Asia. The ARNG is fully engaged in meeting its federal as well as state and local obligations.

U.S. Southern Command (SOUTHCOM)

The ARNG provided extensive support to Active Component (AC) forces in U.S. Southern Command (SOUTHCOM) through the Overseas Deployment for Training (ODT) program. ARNG soldiers performed a variety of important missions as SOUTHCOM and U.S. Army South established operations in Miami and Puerto Rico. During fiscal year 2000 the ARNG deployed more than 4,500 soldiers to support SOUTHCOM's regional engagement strategy through Medical Readiness Training Exercises (MEDRETE), unit exchanges and joint-combined exercises such as NUEVOS HORIZONTES, TRADEWINDS and FUERZAS ALIADAS.

U.S. European Command (EUCOM)

The ARNG mobilized and deployed 1,395 soldiers to support the Commander in Chief, U.S. European Command (CINC EUCOM) for Operation Joint Forge (OJF) in Bosnia during fiscal year 2000. Units deployed in support of this effort included medical, public affairs, aviation, military police and transportation. To date, approximately 6,837 soldiers from more than 253 units, from 50 states, three territories and the District of Columbia have mobilized for active duty in support of Operation Joint ENDEAVOR/GUARD/FORGE.

The 49th Armored Division (AD), Texas ARNG, provided a division Headquarters and Headquarters Company (HHC) for Task Force Eagle (Bosnia) from March to October 2000. Fiscal year 2000 also saw the first mobilization of elements from two enhanced Separate Brigades (eSBs) as part of the maneuver force in Bosnia. Two companies (one armor/one mechanized) from the 30th eSB supported the Heavy Task Force while two light infantry companies from the 45th eSB supported the Light Task Force. Follow-on Division HHCs that have been notified for rotation to Bosnia are, in sequence: 29th Infantry Division (ID), 28th ID, 35th ID, 34th ID, 38th ID and 42nd ID.

The ARNG has provided 27 units for a total of 605 soldiers from 20 different states in support of Operation Joint Guardian (OJG) to date. These soldiers provided medical, legal, religious and security support for base camp operations at Camp Able Sentry in Skopje, Macedonia. Fiscal year 2001/02 will see expanded usage of ARNG units. Mobilizations in fiscal year 2001/02 include a Mobile Public Affairs Detachment, Target Acquisition Battery, Rear Area Operations Center, Military Intelligence Force Protections Teams, Medical Company (Air Ambulance) and a Combat Engineer Asphalt Platoon.

Support to EUCOM has steadily increased from 8,200 soldiers deployed in fiscal year 1997 to nearly 13,500 in fiscal year 2000. These soldiers participated in more than 20 exercises and supported annual infantry/engineer rotations in the Combat Maneuver Training Center-Europe.

The ARNG also provides Combat Support (CS) and Combat Service Support (CSS) functions across the spectrum to include ground and aviation maintenance, military police, signal, medical, judge advocate general, chaplain, finance, public affairs and engineer facility support.

U.S. Central Command

The ARNG continues to support U.S. Central Command (CENTCOM) with deployments in support of OPERATION DESERT SPRING (ODS). In July 2000, Aviation Task Force 111 with units from Florida (AH–64 Apache) and Arizona, Idaho, Montana, and Utah (UH–60 Blackhawk), provided the task force headquarters and aviation crews. Air traffic controllers for the task force were provided by the Indiana ARNG. Aviation Task Force 211, consisting of aviation crews from the Utah ARNG (AH–64 Apache), Wisconsin and Indiana ARNG (UH–60 Blackhawk), will deploy in August 2001.

The ARNG has been heavily involved in providing force protection assets in support of ODS. Company level force protection missions began with the mobilization and deployment of two infantry companies involving 272 soldiers from the 39th eSB, Arkansas ARNG, in May 1999. A second rotation involving 272 soldiers from two infantry companies—one from the 39th eSB, Arkansas ARNG, and the other from the 41st eSB, Oregon ARNG—began in September 1999. A third deployment occurred in January 2000, with the 41st eSB, Oregon ARNG, providing two infantry companies.

Rotations for the force protection mission are continuing with the ARNG divisional combat infantry companies from the 35th ID, Illinois ARNG, and 34th ID, Iowa and Montana ARNG, through May 2001. Infantry companies from the 35th ID,

Kansas and Nebraska ARNG, 40th ID, California ARNG, and 29th eSB, California ARNG, will support the force protection mission from May 2001 through May 2002.

Additional ARNG support to CENTCOM through the ODT program increased to nearly 400 service members in fiscal year 2000. This support consisted primarily of military intelligence, equipment maintenance, military police, special forces and communications efforts in support of AC exercises such as LUCKY SENTINEL and BRIGHT STAR. In fiscal year 2001, more than 1,100 soldiers will participate in CENTCOM exercises, including CENTRASBAT.

U.S. Pacific Command (PACOM)

The U.S. Army Chief of Staff announced in September 2000 the alignment of ARNG divisions and enhanced Separate Brigades (eSB) to the Korean Major Theater War Area of Operations. Now, in the Pacific theater, bilateral and multinational training exercises require ARNG participation. In fiscal year 2000, more than 700 ARNG personnel participated in the three major Joint Chiefs of Staff (JCS) exercises in Korea, and two exercises in Japan, Singapore and Thailand. Also linguists, engineers, aviation, maintenance, and public affairs personnel provided support in non-exercise events. In fiscal year 2001, more than 3,000 ARNG personnel will team up with wartrace headquarters in these same exercises to support the Commander in Chief, Pacific Command (CINCPAC) and Commander in Chief, United Nations Command (CINCUNC) in the Pacific region.

U.S. Special Operations Command

A significant portion of The Army's Special Operations capability resides in the force structure of the ARNG. As key players in the National Military Strategy, the 19th and 20th Special Forces Groups, located in 15 states across the United States continue to provide a high level of mission related operational tempo relief to Special Forces Command as a result of deployments throughout the world.

Both 19th and 20th Special Forces (SF) Groups supported JCS Exercises and Joint Combined Exercise Training (JCET) in several theaters with a total of 1,449 soldiers deploying on 28 missions to 18 countries. In the Pacific theater, the ARNG Special Forces provided 384 soldiers to support PACOM Exercises and JCETs. These exercises included FOAL EAGLE, ULCHI FOCUS LENS, and COBRA GOLD. Of the 384 soldiers deployed to PACOM, 275 soldiers participated/conducted JCS Exercises and JCETs in Korea.

In SOUTHCOM, the ARNG Special Forces supported TRADE WINDS and CABANAS JCS exercises as well as conducted JCETs with 795 soldiers in Honduras, Jamaica, Argentina, Antigua, Trinidad and Tobago, Saint Lucia, Bahamas, Dominican Republic, Saint Kitts, Dominica, Grenada, Barbados and Bolivia.

In EUCOM, the ARNG Special Forces conducted JCETs with 62 soldiers in Germany and Portugal as well as provided 37 soldiers under Presidential Reserve Call-up (PRC) and Temporary Tour of Active Duty (TTAD). In CENTCOM, ARNG Special Forces supported the Special Operations Command with four Special Forces soldiers. In U.S. Joint Forces Command (JF COM), ARNG Special Forces supported JCS sponsored Exercise ROVING SANDS with six soldiers. A total of 1,449 soldiers deployed into five different theaters in support of our National Military Strategy.

Intelligence Contributory Support (ICS) Programs

ARNG soldiers also perform real-world intelligence missions in support of unified commanders, intelligence agencies and military departments. Mission support areas include intelligence production, collection, imagery analysis and linguist support. ARNG intelligence soldiers provide cost-effective, time critical, capability-based value to meet peacetime and contingency requirements of commanders. Intelligence Contributory Support (ICS) programs include the Joint Reserve Intelligence Program, the Funded Reimbursable Authority Program and the Defense Intelligence Reserve Program. Readiness Training, Intelligence (REDTRAIN) also provides live environment scenarios for tactical intelligence training.

Military Intelligence

The Army National Guard's Military Intelligence (MI) force is the largest of any of the Reserve Components. With trained and ready MI soldiers, the ARNG performed approximately 20,000 man-days in support of military operations.

In fiscal year 2000, MI operations ranged from individual language training in the Republic of Vietnam to conducting document exploitation for the Department of Defense's (DOD) Prisoner of War (POW) and Missing in Action (MIA) Task Force.

In addition, the ARNG's MI soldiers and units supported all the theater CINCs and their major subordinate commands.

Guard MI soldiers in Japan participated in joint exercises, acting as watch officers in Korea and for Joint Task Force Bravo in South America. In addition, ARNG MI

soldiers provided a wide array of support from acting as translators for EUCOM personnel while in Poland to analyzing intelligence for Balkans operations.

The ARNG military intelligence community continues to play a vital role in the Balkans. Numerous ARNG MI soldiers have deployed to Bosnia and Kosovo as part of force protection teams as well as individual augmentees. The 629th MI Battalion, 29th ID (L) deployed 129 soldiers to support the 49th Armored Division (AD) for its rotation. The 241st MI Company/41st eSB will support the 29th ID for its deployment.

ARNG MI elements also conducted mission augmentation for agencies such as the Office for the Deputy Chief of Staff for Intelligence (ODCSINT), Defense Intelligence Agency (DIA), U.S. Border Patrol, U.S. Customs, and the U.S. Coast Guard. These soldiers also participated in counterdrug operations and other law enforcement activities.

This starts the second year for the newly created ARNG Anti-terrorism/Force Protection (AT/FP) program. The program started from scratch and has come a long way. The program has made great inroads with at least one soldier from every battalion in the ARNG receiving training in AT/FP.

The ARNG directorate provided training on how to write and formalize state level AT/FP plans and has been able to validate requirements in the Program Objective Memorandum (POM). Additionally, the ARNG has been instrumental in the rewrite of Army Regulation 525–13, the Army's AT/FP guide.

The ARNG coordinated with the Department of the Army in identifying installations that require separate AT/FP plans and developed a timeline for providing assistance to the states and installations that require them.

Major Exercises in the Continental United States (CONUS)

ARNG units throughout the country trained as part of the combined arms team in several major fiscal year 2000 Continental United States (CONUS) exercises. More than 12,300 soldiers from 142 units trained on mission essential tasks through participation in exercises such as ROVING SANDS, GOLDEN COYOTE, COOPERATIVE SAFEGUARD, GRECIAN FIREBOLT, PURPLE DRAGON, GOLDEN CARGO and GLOBAL PATRIOT.

Army National Guard (ARNG) State Mission Support

Domestic mission operational tempo (OPTEMPO) during fiscal year 2001 continues at the rapid pace set in fiscal year 2000. Through the end of October 2000, 17 states had conducted 25 Emergency Response Missions totaling more than 6,800 man-days of effort. This level of effort is expected to continue throughout fiscal year 2001 and into fiscal year 2002.

In addition to responding to local emergencies, the ARNG routinely performs missions that allow units to assist communities while performing required training activities. Under the Innovative Readiness Training (IRT) Program, the ARNG provided in excess of 250,000 soldier man-days in fiscal year 2000 to improve schools, parks and recreation facilities, build and maintain roads, and administer immunizations and provide medical care. During fiscal year 2001, continued support at even greater levels is expected.

Weapons of Mass Destruction Mission

The National Guard is in the process of validating and fielding 32 full-time Civil Support Teams (CSTs) as authorized by Congress. States that do not have these full-time CSTs available will have teams composed of part-time Guard personnel. These part-time CSTs will provide a partial response capability.

CSTs have been given the mission of:

—Assessing a chemical, biological, radiological or nuclear event in support of the local incident commander.

—Advising civilian responders regarding appropriate actions.

—Facilitating requests for assistance to expedite arrival of additional state and federal assets to help save lives, prevent human suffering and mitigate property damage.

These teams will be called upon as a part of a state emergency response or will mobilize in a federal support role. Emergency responders will receive training through the National Guard's Distance Learning network.

The Guard is also planning additional training and equipment fielding for other Guard units that will be used to respond in missions involving the reconnaissance of chemical, biological and radiological events and patient decontamination.

Plans are currently underway to task organize existing National Guard units within each state to form a Joint State Task Force Headquarters for consequence management that develops additional capability to enhance this important civil support mission. The Joint State Task Force headquarters is responsible for developing

the consequence management annex to their state's emergency response plan. In addition, the Joint State Task Force headquarters will act as the interagency coordinator within that state, responsible for conducting community readiness exercises to assess the state's emergency response plan.

Another means to enhance preparedness within our communities is through the Guard's Distance Learning network. The network provides invaluable training opportunities to state and local emergency first responders in communities where training resources are limited. Additional resources are needed to more effectively manage and enhance the national and state terrorism response assets.

Operational Support Airlift Agency (OSAA)

The Operational Support Airlift Agency (OSAA) is a Department of the Army Field Operating Activity of the National Guard Bureau that provides management, oversight, and execution of The Army's Continental United States (CONUS) Operational Support Airlift (OSA) program with additional support to Hawaii, Alaska, Puerto Rico and the Virgin Islands. OSAA is the ARNG's proponent agency for fixed wing aviation issues, procedures, and resourcing. Activated in 1995, OSAA earned immediate recognition as one of The Army's first ever multi-component operational units merging assets and personnel from the Active Component (AC) and both Reserve Components for a 24-hour continuous operation.

Headquartered at Fort Belvoir, Va., OSAA provides command, staff, and resourcing for fixed wing assets stationed in 69 locations throughout CONUS as well as eight separate locations Outside the Continental United States (OCONUS). The brigade level command known as OSAA, and battalion level Operational Support Airlift Command (OSACOM) commanders share a common staff for economy and efficiency. In order to provide the best mix of airlift support to widely scattered Department of Defense (DOD) elements, OSAA maintains a unique organizational network of six distinctly different fixed wing aircraft types dispersed across the several states and territories.

Mission diversity is a hallmark of OSAA that underscores the significance of this program. Delivering assessment teams to storm-damaged states or providing aircrews and planes for OCONUS humanitarian relief is routine. Other recurring missions include paradrop support for special operations units or hauling large parts. These missions demonstrate Army fixed wing OSA capability and responsiveness to perform timely air movement of DOD passengers and cargo. On a daily basis, OSAA flies Army personnel and other DOD travelers on official business, subject to priority and cost-saving criteria.

OSAA's airlift support is provided by a variety of fixed wing aircraft including C–12, C–23, and C–26 turboprop airplanes and UC–35, C–20, and C–37 turbojets. For optimum efficiency, the deliberate mix of personnel includes part-time Guard soldiers, state and federal level Active Guard and Reserve (AGR) officers, as well as AC aviators and Department of the Army civilians (DACs).

Fiscal year 2000 was a banner year for OSAA's flying hour program. Never before in the agency's history has flying hour execution reached the performance levels of this single 12-month period. OSAA aircraft flew 60,261 hours, transported more than 1.6 million pounds of cargo, and carried 108,242 passengers in direct support of DOD missions. The heightened passenger levels alone represent an increase of approximately 20 percent over fiscal year 1999. Beneficiaries of this successful mission execution include both the DOD and the American taxpayer through cost avoidance totaling more than $50 million in related business transportation expenses.

OSAA provides command oversight to the Fixed Wing Army National Guard Aviation Training Site (FWAATS) in Bridgeport, W.Va. The mission of FWAATS is to conduct individual aircrew training in modernized fixed wing aircraft operated by the ARNG. FWAATS performs formal academic training under the Total Army School System (TASS) and conducts individual aircrew training, instructor qualification, instrument examiner, standardization training, and flight engineer qualification courses. FWAATS routinely trains between 200 and 300 aircrew members per year, hosting aviators and flight engineers from across the country.

OSAA is an ARNG command committed to providing safe and reliable fixed wing aviation service from the states for any contingency. By harnessing Reserve Component efficiency, OSAA proves the viability of multi-component operational mission support on a daily basis to any DOD requester. OSAA is a command uniquely structured to ensure the highest state of wartime readiness through the effective execution of its peacetime mission.

MANNING THE FORCE

FULL-TIME SUPPORT

Full-Time Support (FTS) personnel are key contributors in achieving Army National Guard (ARNG) readiness objectives. Military Technician and Active Guard and Reserve (AGR) personnel are involved in every facet of the day-to-day operations, to include administration, payroll, supply, training, maintenance, recruiting and retention efforts in support of the ARNG. Achieving sufficient levels of FTS to enhance unit readiness and quality of life for our traditional part-time soldiers and their families remains a high priority.

Validated Requirements

During the Program Objective Memorandum (POM) 2002–07 cycle, The Army validated a need for 83,650 full-time support personnel to support a force structure of 388,000 spaces. This represented 41,321 AGR and 42,329 Military Technician requirements. Requirements are determined through detailed analysis of workload and are calculated for the entire ARNG force structure. However, FTS requirements associated with emerging missions such as civil support and initiatives to support Active Component (AC) and Reserve Component (RC) integration are determined annually and are additive to the total requirements reflected above.

Authorization vs. Validated Requirements

The National Defense Authorization and Appropriation Acts provided an increase of 526 AGR and 771 military technician authorizations for fiscal year 2001 for an overall end strength of 22,974 AGRs and 24,728 Military Technicians. Despite the increase in FTS, the fiscal year 2001 authorized levels equate to only 57 percent of the validated requirement. This has had an impact on our ability to adequately staff local armories, thereby diminishing the ARNG community presence.

In addition, Congress provided for an increase in the number of personnel serving in senior officer and enlisted grades (controlled grades) to support promoting fully qualified AGR soldiers who have been serving in higher grade positions, but whose career progression has been restricted due to senior grade caps. As the ARNG seeks additional full-time support authorizations, there is a need for a corresponding increase in controlled grades to provide career opportunities commensurate with the requirement for a career AGR program.

Current FTS Manning Levels in the "High Risk" Category

Due to funding shortfalls, The Army has applied a methodology based on deployment scenarios to arrive at a minimum acceptable level of full-time support. Falling below that level would result in unacceptable risk in meeting readiness goals as established in Army regulations and in the Defense Planning Guidance. This is referred to as the FTS "Department of the Army (DA) high-risk" requirement level. The methodology is the same for both of the Army's reserve components. For the ARNG, the "high-risk" requirements are 30,402 AGR and 29,319 Military Technician personnel. Given that current authorization levels are significantly below the high-risk requirement level, The Army has developed an incremental growth plan to achieve the high-risk level over a 10-year period as reflected in the chart to the right. The Army's recognition that increased FTS is needed to enhance overall readiness of the RC is unprecedented.

Recruiting and Retention Overview

The ARNG's fiscal year 2000 end strength objectives included achieving a selected reserve strength of 350,000—38,308 commissioned and warrant officers and 311,692 non-commissioned officer and enlisted personnel. To attain this goal, enlisted gains were programmed at 54,034, officer gains at 2,991 and enlisted extensions at 46,230. Enlisted losses were projected not to exceed 61,503.

Enlisted Personnel Recruiting and Retention

Enlisted personnel recruiting and retention were continuing success stories for the ARNG during fiscal year 2000. Enlisted accessions for the year exceeded the program objective of 54,034 by totaling 62,015, or 114.7 percent of the goal. Non-prior service (NPS) accessions and prior service (PS) accessions also exceeded program objectives. NPS accessions were 32,072, or 118.7 percent of the objective, and PS accessions were 29,943, or 110.8 percent of the objective. These statistics reflect an accession mix of 51.7 percent NPS enlistments and 48.3 percent PS enlistments. The overall Army National Guard loss rate through the end of fiscal year 2000 was 19.9 percent versus an overall objective of 18 percent.

Incentive Programs

The Selected Reserve Incentive Programs (SRIP) for fiscal year 2000 offered the following:

—An $8,000 enlistment bonus for Non-Prior Service (NPS) enlistees into high priority units.
—A $5,000 enlistment bonus for NPS enlistees into non-high priority units.
—An $8,000 Civilian Acquired Skills Program (CASP) bonus for NPS enlistees.
—An affiliation bonus for prior-service enlistees based on their remaining Military Service Obligation (MSO).
—The Student Loan Repayment Program for NPS enlistees and current members of the ARNG with existing loans who reenlist or extend in a high priority unit.
—A $2,500 three-year reenlistment/extension bonus.
—A second three-year reenlistment/extension bonus of $2,000 for soldiers with less than 14 years total service upon completion of the first three-year reenlistment/extension bonus. To be eligible for two three-year reenlistment/extension bonuses, the contracts must be consecutive.
—A $5,000 six-year reenlistment/extension bonus for members of high-priority units who have less than 14 years total service at the time of the reenlistment or extension and who have not received a previous reenlistment/extension bonus.
—A $2,500 three-year prior service enlistment bonus for PS personnel who have completed their MSO, have less than 14 years total service and have received an honorable discharge.
—A second three-year prior service bonus of $2,000 for soldiers having less than 14 years total service upon completion of the first three-year prior service enlistment bonus.
—A $5,000 prior service enlistment bonus for a six-year reenlistment for PS personnel who have completed their MSO, have less than 14 years total service, have received an honorable discharge and have not received a previous prior service enlistment bonus.

Benefits Administration Reporting and Tracking System (BART)

In January 2001, a PC-based software system that manages service member benefit programs was expected to be implemented in all of the states. Known as the Benefits Administration Reporting and Tracking System, or BART, this system contains reporting features designed to administer the following educational benefit programs: Tuition Assistance Program, Montgomery GI Bill Program, and Bonus Incentives Programs. In addition, BART monitors the regulatory compliance components of program budgets, life-to-date and year-to-date maximum benefits, and automatically calculates percentages or maximum rate limits through easy-to-use program modules.

This system was developed as a result of the U.S. Army Auditing Agency audit conducted from April 1994 through April 1995. A recent Inspector General assessment also made the same recommendation. The BART system tracks program eligibility, payment schedules, programs obligations, flags files for follow-up requirements, and maintains incentive payment history at the social security number level of detail.

Education Assistance

The ARNG has traditionally used educational incentives as a recruiting and retention tool. Educational benefit programs are good for the ARNG as well as the individual soldier. Tuition assistance was provided to more than 22,000 part-time Guard soldiers in fiscal year 2000. Soldiers were offered 75 percent tuition assistance for 15 semester hours not to exceed $3,500 per soldier per fiscal year.

Distance Learning (DL) and External Degree Tuition Assistance

Distance Learning (DL) and external degree tuition assistance were available for soldiers and ARNG Department of the Army (DAC) employees in fiscal year 2000. These benefits were provided upon registration for traditional semester length courses that required 24 weeks or less for completion. Tuition reimbursement for courses longer than 24 weeks was also available. Enrollment in DL programs has increased threefold as a result of the up-front tuition assistance offered for the shorter courses. DL programs allow soldiers to pursue vocational, baccalaureate, graduate and doctoral studies without entering a traditional classroom. These programs will be managed by the Defense Activity for Nontraditional Education Support (DANTES) program starting in January 2001.

Defense Activity for Non-traditional Education Support (DANTES)

All 33 nationally recognized certification exams offered through the DANTES were funded through the ARNG Tuition Assistance program in fiscal year 2000. Previously, only the Automotive Service Excellence (ASE) Exam and the Food Protection Certification Program (FPCP) exam were funded. Other exams funded under this effort include the Educational Institute of the American Hotel and Motel Association (EIAH and MA) and the Institute for Certification of Computing Professionals. Soldiers are eligible to take certification exams once they complete Initial Active Duty for Training (IADT) and are awarded a Military Occupational Specialty (MOS).

Servicemembers Opportunity Colleges (SOC)

Working with the ARNG, the Servicemembers Opportunity Colleges (SOC) continued to provide college workshops to encourage increased enrollment of non-member accredited colleges and universities to join SOC in support of the local ARNG community with post-secondary education programs. SOC colleges limit their on-campus requirements to 25 percent of required attendance, a prerequisite for many ARNG soldier-students who would otherwise be unable to attend. SOC also worked in the recruiting and retention arena along with strength maintenance non-commissioned officers to encourage young men and women to enlist.

Officer Accessions and Retention, Fiscal Year 2000

During the implementation of the Reserve Officers Promotion Management Act (ROPMA), time in grade (TIG) requirements for promotion to first lieutenant were changed from three years to two years. Second lieutenants with an excess of two years TIG were not grandfathered; therefore, instead of seven years time in service for consideration for promotion to captain, several year groups served eight. Corrective measures were taken to rectify this error, and the second phase of the program began in November 2000.

The records of captains who were promoted by boards that met from November 1998 to February 1999 will be reviewed to determine if an adjustment to their dates of rank is required. Some captains may be eligible for as much as nine to 12 months of back pay with adjustment of their dates of rank.

The total officer strength at the end of fiscal year 2000 was 37,400. While officer accessions were up 11.8 percent over fiscal year 1999 accessions, officer end strength was 908 officers short of the programmed objective. This shortfall was due to a higher than expected loss rate among ARNG officers. The ARNG is working vigorously to identify the reasons for these higher than projected losses by conducting telephonic and mail surveys with departing officers. Survey results to date reveal a variety of reasons: some officers wanted more time to spend with their families, some had conflicts balancing their civilian jobs with their military duties, some were unable to attend training needed to advance their careers because of lack of funding or training seat availability, and others cited personal reasons.

Accelerated Officer Candidate School (OCS) Program

The ARNG initiated an accelerated National Guard Bureau (NGB) Officer Candidate School (OCS) Program in 1996 that has proven very successful. This accelerated program cuts 11 months off the traditional OCS course duration—eight weeks full-time versus 13 months part-time. This is particularly beneficial to states experiencing large company-grade officer vacancies.

The NGB has been programming about 80 students per year for the last five years. The class size projection doubled to 160 students in fiscal year 2001 due to forecasted training requirements submitted by the states.

The shortage of company grade officers continues to be a challenge across The Army. In an attempt to decrease company grade officer losses, the ARNG submitted proposed legislation to the Assistant Secretary of the Army for Manpower and Reserve Affairs (ASA M&RA) under the Unified Legislation and Budgeting (ULB) process in April 2000 that will offer a student loan repayment program incentive for company grade officers. The ARNG is also exploring the feasibility of submitting legislation to offer potential bonuses for company grade officer continuation.

In addition, Cadet Command authorized 800 Guaranteed Reserve Forces Duty contracts for the Army Reserve Components for fiscal year 2001. This is the first year that Cadet Command has established a separate mission for Reserve Component (RC) accessions. The ARNG will receive approximately 500 new accessions from this mission goal.

The ARNG also supports the Deputy Chief of Staff for Personnel's (DCSPER's) initiative for Selective Retention Boards that will allow selected captains and majors to be retained so that they may reach 20 years of active service. Further, the ARNG

also supports the DCSPER's initiative to select captains for promotion who do not possess a baccalaureate degree or military education certification. The actual promotion to the next higher grade will become effective at such time as the individual provides proof of civilian or military education requirement completion.

Warrant Officer Personnel Management

The Army National Guard continues to address significant challenges in warrant officer personnel management. Technical warrant strength is down to 71.8 percent, while aviation warrants have fallen slightly below requirements to 94.3 percent. The challenge for the future lies in the introduction of the Warrant Officer Personnel Management System, which will mirror the transition to Officer Personnel Management System (OPMS) XXI.

Enlisted Personnel Management

The ARNG has continued with its personnel management reform as it pertains to enlisted soldiers. In December 1999, the ARNG became a participant in the Army's Development System XXI initiative. Interacting with Army proponents, the issues of force structure changes, training and strength maintenance as related to enlisted personnel management became topics of intense interest among Army leadership.

Soldiers from the field requested that The Army leadership review the ARNG enlisted promotion system. As a result, minor changes will be incorporated within the next two years. The system remains virtually unchanged in its intent and process, but will place more emphasis on a soldier's potential to serve at a higher level of responsibility based on his or her performance.

Key enlisted personnel management issues have been successfully staffed through both the Military Personnel Management Offices and the State Command Sergeants Major in an effort to meet soldier expectations. Additionally, the Army Human Resource Division has been actively involved with the functional review of various Army proponents and their current initiatives to consolidate enlisted MOS fields as directed by the Army Chief of Staff. The ARNG has been successful in making the proponents aware of the impacts their proposed changes or initiatives could have on the RC when considering wholesale changes within the AC.

ORGANIZING FOR SUCCESS

The Army Transformation

The U.S. Army is transforming based upon the emerging security challenges of the 21st century and the need to respond more rapidly across the full spectrum of operations. As an integral part of The Army, the Army National Guard (ARNG) will transform as well. One ARNG brigade is expected to begin transformation prior to 2008. The unit to transform is expected to be chosen by the Chief of Staff of the Army (CSA) in the fall of fiscal year 2001. The Director of the ARNG nominated two units to be the first ARNG interim brigade; the 56th Brigade of the 28th Infantry Division, Pennsylvania ARNG, and the 155th enhanced Separate Brigade (eSB), Mississippi ARNG.

In the current plan the entire ARNG will transform to the objective force by fiscal year 2032. Before transformation is complete, the portion of the ARNG not yet transformed will remain part of the Legacy Force. The Legacy Force is the strategic hedge that provides essential capability to support the National Command Authority and warfighting CINCs throughout the Transformation activities.

The Active Army will cascade the most modern equipment to the ARNG. Selected legacy formations in both the Active and Reserve Components will be recapitalized to enhance key armored and aviation systems, as well as improve light force lethality and survivability.

Army National Guard Unit Structure

The ARNG continues to structure its forces to provide for a compatible and interoperable force that is fully capable of accomplishing state, national, and international missions in war and peace. To meet these requirements, the ARNG maintains a balanced mix of combat, combat support (CS), and combat service support (CSS) units. These units are structured to integrate seamlessly with Active Component units as needed.

The ARNG force structure allowance was 388,000 in fiscal year 2000. The ARNG structure laydown is as follows: 15 enhanced Separate Brigades, eight divisions, and three strategic brigades (31st SAB, 92nd SIB, and the 207th Scout Group). The ARNG also maintains two Special Forces groups. The composition of the ARNG is 52 percent combat, 17 percent CS, 22 percent CSS, and 9 percent table of distribution and allowances (TDA) units.

The ARNG force structure continues evolving to best support the National Military Strategy (NMS). Ongoing ARNG initiatives will ensure the best mix of forces available to accomplish missions directed by the NMS. The current force structure must have a robust, fully funded modernization program to enable the smaller force to accomplish all of its missions. The ARNG force must remain trained, ready, and equipped to defend our national interests during the 21st century. It must also be ready to respond on short notice to the needs of local communities across the United States.

Army National Guard Division Redesign Study (ADRS)

On May 23, 1996, the Secretary of the Army (Sec Army) approved the Army National Guard Division Redesign Study (ADRS) plan to convert up to 12 ARNG combat brigades and support slice elements from two divisions into required CS/CSS structure. The plan converts up to 48,000 spaces of ARNG combat force structure to CS/CSS beginning in fiscal year 2000 and continuing through fiscal year 2012. The first six brigades have been identified and will be under conversion through fiscal year 2009. Actions beyond those will be linked to the CSS Transformation analysis currently underway. Given The Army Transformation initiative in progress, efforts beyond ADRS Phase II will be linked to the requirements of Transformation.

Two billion dollars exist in the POM to cover existing ADRS funding requirements: $1.9 billion for equipping and $100 million for training. The ARNG, working as The Army executive agent for ADRS has identified requirements in installations, environmental, manning and sustainment that can be supported out of the equipping funding.

The AC/ARNG integrated division concept resulted from the ADRS, as an additional proposal to form two integrated divisions. Each integrated division consists of an AC headquarters and three ARNG eSBs. On Dec. 2, 1997, the Secretary of the Army approved establishing a heavy division headquarters at Fort Riley, Kan. with a forward element at Fort Jackson, S.C. and a light division headquarters at Fort Carson, Colo. They formally activated on Oct. 16, 1999. The division headquarters are currently non-deployable and tailored to provide training/readiness oversight and evaluation to assigned eSBs. The eSBs selected for the 24th ID Mechanized (—) are the 30th Mechanized Infantry Brigade (North Carolina), the 48th Mechanized Infantry Brigade (Georgia), and the 218th Mechanized Infantry Brigade (South Carolina). The eSBs that comprise the 7th ID (—) are the 39th Infantry Brigade (Arkansas), the 41st Infantry Brigade (Oregon), and the 45th Infantry Brigade (Oklahoma).

Teaming is a program that pairs selected AC and ARNG units for mutual support of operational requirements. Partnered divisions conduct joint planning, training, and readiness assessments. The ARNG divisions will augment and assist AC divisions in global response. Teamed units are encouraged to seek mutually supporting operational training opportunities. Currently, teaming is limited to divisional units. The teamed divisions under III Corps are 1st CAV and 49th AD (Texas), 4th ID and 40th ID (California). Under XVIII Corps are 3rd ID and 28th ID (Pennsylvania), 10th ID and 29th ID (Virginia).

Multi-component Initiative (Units formed from Active, Reserve and Guard personnel)

The multi-component initiative blends authorized personnel from more than one Army component (AC, USAR, and/or ARNG) into a single documented unit. The objectives of the multi-component initiative are to enhance AC/RC integration while optimizing the unique capabilities of each component, thus improving the readiness and resource posture. The Secretary of the Army approved an overarching multi-component MTOE policy in June 1998. Total Army Analysis (TAA–05) selected 12 initial MTOE units with which to develop and test procedural options in fiscal year 1999/2000. Thirty-three additional units were subsequently added for fiscal year 1999/2000.

EQUIPPING THE GUARD

Army National Guard Modernization and Transformation

The aging AH–1 Cobra and UH–1 Huey "legacy" helicopters are only marginally supportable today insofar as economic maintenance is concerned. The ARNG Cobra and Huey fleets are rapidly becoming an expensive maintenance burden. Long-term modernization plans called for the UH–1 to be replaced by the UH–60L Blackhawk and the AH–1 to be replaced by the AH–64A/D Apache Longbow in the Aviation Modernization Plan.

The Army transformation initiative announced by Army Chief of Staff General Eric K. Shinseki and briefed to Congress in fiscal year 2000 proposed sweeping changes to aviation force structure. Current structure converts to an aviation Multi-

Function Battalion (MFB). The MFB has a headquarters company, an attack company with AH–64 Apaches, a reconnaissance company with RAH–66 Commanches, a utility company with UH–60 Blackhawks and an Aviation Unit Maintenance (AVUM) company.

Division aviation brigades will consist of a headquarters, two MFB battalions, a division aviation support battalion, a cavalry squadron (with three ground troops, an air cavalry troop with RAH–66s and an AVUM troop), and an Unmanned Aerial Vehicle (UAV) company. Restructuring makes all division aviation battalions and aviation brigades look the same. Similarly, corps aviation converts to a structure with an aviation combat brigade with three MFBs, an aviation combat support brigade with two UH–60 battalions, a CH–47 Chinook battalion and an Aviation Intermediate Maintenance (AVIM) battalion.

The total number of aviation personnel is expected to increase slightly (about 2 percent), but the revised structure results in a reduction in headquarters elements. Under the initial Transformation guidance, the ARNG is expected to lose two brigades, six battalions and 36 companies. The Transformation has an impact on ARNG aviation in every state, not only in personnel and aircraft, but also in facility construction and qualification training for aviators and maintainers.

Accelerated Retirement of Legacy Aircraft

Simultaneously with the restructuring is an Army initiative for accelerated retirement of legacy aircraft (AH–1, OH–58A/C and UH–1), which calls for divestiture of the AH–1s in fiscal year 2001 and the OH–58A/Cs and UH–1s in fiscal year 2004. Implementation within these time frames depends upon transferring older aircraft (AH–64s and UH–60s) from the Active Component (AC) to the ARNG. The ARNG has proposed limited retention of AH–1s, OH–58s and UH–1s to create a bridge that will permit retention of valuable aviation personnel skills pending acquisition of replacement aircraft.

The retirement of the UH–1 with limited or no replacement utility aircraft will leave states without sufficient utility aircraft to execute state contingency missions such as disaster relief responding to floods and earthquakes, as well as fire fighting. Aircraft acquisition is a constraint to implementation. For example, the Force Development Division of the Office of the Deputy Chief of Staff for Operations (DAMO–FDV) estimates an Army requirement of 330 additional UH–60s at the end of the fiscal year 2002–07 Program Objective Memorandum (POM), but with current acquisition plans of 10 per year it will be the year 2040 before the requirement is filled. Meanwhile, the ARNG continues to coordinate the aviation force structure redistribution to accommodate the Army Aviation Transformation Plan.

Major Fiscal Year 2002 Force Modernization and Future Force Modernization Plans

The Army National Guard (ARNG) modernization strategy is to provide for a compatible and inter-operable force. This force will be capable of fulfilling state, national and international missions in war and peace. Resourcing this force with modernized equipment and training packages to operate this equipment is key to maintaining the quality force the nation expects from the ARNG.

The modernization of field artillery units to M109A6 Paladin, Multiple Launch Rocket Systems (MLRS) and Highly Mobile Artillery Rocket Systems (HIMARS) are all significant initiatives. The ARNG has assumed the corps level air defense role with the activation of nine Avenger battalions. All nine corps Avenger battalions are fully fielded with the weapon system.

Congress appropriated $95 million in fiscal year 1998 to procure M2A2ODS Bradley Infantry Fighting Vehicles (BIFV) for the ARNG. Follow on fiscal year 2003 Congressional appropriations are required to equip the Georgia ARNG. The eight heavy enhanced Separate Brigades (eSB) are currently equipped with M1A1 Abrams tanks. Initiatives are under way to upgrade the remaining armor from M1A1 to M1A1AH.

By the end of fiscal year 2001, the ARNG will have 18 M109A6 Paladin battalions. The ARNG divisional battalions still require Paladin for modernization. Due to a funding shortfall from fiscal year 2000 and fiscal year 2001, the MLRS conversion program will be delayed for two years (from fiscal year 2001 to fiscal year 2003). The fielding of the Highly Mobile Artillery Rocket System (HIMARS) to the ARNG is tentatively scheduled to begin in fiscal year 2005.

The ARNG anticipates fielding the M2A2ODS BIFV to the 218th eSB, South Carolina ARNG, through fiscal year 2002. This begins to address the need to provide the eSBs with upgraded BIFVs, and the further cascading of older Bradleys into ARNG divisions. These initiatives will move the ARNG along in its modernization strategy to ultimately have a pure fleet of BIFVs.

The remaining eight corps Avenger battalions will be fielded with the Forward Area Air Defense Command, Control and Intelligence (FAADC²I) System and Sentinel radars from fiscal year 2001 through fiscal year 2003.

The Army Battle Command System (ABCS) is The Army's architecture for the overall integration of the digital command and control system found at all echelons from theater level to the weapons platform. Currently, ARNG units assigned to III Corps will receive the required ABCS applications by fiscal year 2004. However, to make the ABCS applications inter-operable and functional, units will require a digital pipeline. The Enhanced Position Location Reporting System (EPLRS) is the current system that supports ABCS applications until the Joint Tactical Radio System (JTRS) is fielded to the ARNG. Funding in the current Program Objective Memorandum (POM) to support digitization of the eSB and ARNG divisions does not exist.

Additional modernization support comes from the continued fielding of SINCGARS radios—a key component in interoperability with The Army. The fielding plan has a window of June 2000 through June 2004 for all 15 eSBs, eight ARNG divisions and remaining units. Ten eSBs have been fielded with SINCGARS radios to date. The remaining five eSBs are currently receiving them. SINCGARS fielding to the eSBs should be completed in June 2001. The first three of the eight ARNG divisions will start fielding SINCGARS from March through August 2001, finishing early in 2002. In addition, echelons above division, field artillery brigades and air defense units, which support early deploying forces, are receiving SINCGARS SIP radios.

The Javelin is currently being fielded to the Active Army as its medium weight manportable Infantry anti-armor weapon system. Javelin replaces the Dragon medium anti-tank weapon. The current budget fields the Javelin Command Launch Unit (CLU), as a replacement for Dragon, to 100 percent of the ARNG eSBs and Special Forces (SF) Group requirements. Fielding to the ARNG eSBs and SF Groups will begin in fiscal year 2004 and is expected to be complete in fiscal year 2006. Fielding for funded ARNG division is planned from fiscal year 2006 to fiscal year 2008. However, this second phase of fielding has evolved to the point where more than three division equivalents and corps engineer battalions are currently unfunded. In addition, unit basic loads of missiles are also unfunded.

The ARNG received more than 1,700 MK–19 Grenade Machine Guns in fiscal year 1999. Total requirement for the MK–19 is more than 4,000. By the second quarter of fiscal year 2003, the ARNG will receive another 2,653 weapons. The MK–19 is unfunded past the second quarter of fiscal year 2003.

The ARNG started receiving the M240B Medium Machine Gun during the third quarter of fiscal year 2000. Fielding of the eSBs will begin in the second quarter of fiscal year 2001 and should be completed by the second quarter of fiscal year 2002. Remaining ARNG units down to Force Package 4 will receive the M240B beginning in the third quarter of fiscal year 2002 through the third quarter of fiscal year 2003.

The M4 Carbine was fielded to ARNG units during the third quarter of fiscal year 2000 and will continue to the eSBs through the third quarter of fiscal year 2002. A total of 39,541 M4s going to ARNG units down to Force Package 4, beginning in the fourth quarter of fiscal year 2002, are now unfunded because of Transformation.

The ARNG has received several thousand M249 Squad Automatic Weapons (SAWs), and will receive 31,546 SAWs by the end of the third quarter of fiscal year 2003. This will fill 84 percent of requirements. Fielding of M16A4s to the ARNG begins in the first quarter of fiscal year 2003 with 3,168 weapons. The fielding will continue through the fourth quarter of fiscal year 2003, with a final fielding of 23,849 M16A4s to the ARNG by the end of the fourth quarter of fiscal year 2006.

The AN/PVS–14 Monocular fielding was completed in November 2000. Fielding of the AN/PVS–7D began in the third quarter of fiscal year 2000 to the eSBs, and will continue through the end of fiscal year 2002. Fielding to Guard divisions and remaining units will begin after 2002.

The final fielding of the M40 Protective Mask, M42 Protective Mask and M41 Protective Mask Test Set to the ARNG continued throughout fiscal year 2000. ARNG fielding will conclude by the fourth quarter of fiscal year 2001.

The ARNG completed the fielding of 168 FMTVs to field artillery, transportation and quartermaster units in fiscal year 1999. The second fielding of FMTVs to the ARNG will start in fiscal year 2001 and conclude in fiscal year 2003.

The ARNG is programmed to receive 1,034 M1078 Light Medium Tactical Vehicles (LMTVs) to modernize high priority units. The ARNG will receive the first of 380 LMTVs by the fourth quarter of fiscal year 2001. The third fielding of FMTVs will start in fiscal year 2007 and conclude in fiscal year 2008. The ARNG will receive an additional 2,030 FMTVs for fielding to First Digitized Corps ARNG units.

The 2,030 FMTVs will consist of 1,200 LMTVs and 830 MTVs. Other Procurement Army (OPA1) is the source of funding for the second phase of FMTV fielding.

During fiscal year 2001 and fiscal year 2002, 2-kilowatt Military Tactical Generators will be fielded to all ARNG units. Also during this time, the highest priority ARNG units will receive the 5–60-kilowatt Tactical Quiet Generators.

READINESS

Readiness—Personnel and Equipment

The Army National Guard (ARNG) is committed to providing support for the National Military Strategy, Operations Other than War, and local domestic and humanitarian missions in all 50 states, three territories and the District of Columbia. Through a combination of AC equipment cascading, equipment procured and issued via the fiscal year Defense Plan, separate appropriations such as the National Guard Reserve Equipment Appropriation and our own initiatives, equipment on hand levels of fill remain steady throughout the ARNG.

As The Army goes through a period of transformation, the modernization of ARNG units is a major concern due to our increased involvement in deployments to areas such as Southwest Asia (SWA), Bosnia, and Kosovo. The Commanders in Chief (CINCs) expect ARNG soldiers to be fully trained and equipped upon arrival in the area of operation, but this is not always successfully accomplished. In many cases, it has been necessary to request out-of-cycle fieldings to provide required equipment for various ARNG units selected for deployment. This impacts the entire equipping and fielding process.

Our logistical challenges today center around four areas: modernization and interoperability; sustainment of the aging Tactical Wheel Vehicle (TWV) fleet; shortages of TWVs and the lack of military technicians. Interoperability issues resulting from the lack of modernized equipment continue to challenge the ARNG's ability to deploy, shoot, move and communicate.

Outdated Equipment

ARNG equipment such as the M1 Abrams Tank, M2/M3 Bradley Fighting Vehicles and various electronic devices and communication systems such as the Single Channel Ground and Airborne Radio System (SINCGARS) and Night Vision Devices are in short supply and/or several models or iterations behind the Active Component (AC). Recent deployments in support of Joint Chief of Staff (JCS) Exercises and humanitarian missions often compete for the same, limited equipment identified for other operations and missions.

Sustainment of Aging Fleet

Sustainment of the aging TWV fleet is another area of great concern. More than 25 percent of the ARNG's total TWV fleet has exceeded its normal service life. This fleet is aging faster than it can be modernized. Sustainment costs both in repair parts and maintenance hours continue to escalate. The Army has addressed this issue with the proposed start of various rebuild programs, but without resolution of TWV shortages, this issue will continue to manifest. Shortages of TWVs compound the sustainment issue. Modernized TWVs are needed now to fill critical shortages, and to displace and retire aged vehicles.

Equipping Issues and Deployment

Equipping issues are becoming more significant as our units are preparing for deployments that require modernized equipment in the area of operation. Units are training on equipment they are issued, some of which is a substitute for the more modernized equipment. For example, units are training with VRC12-series radios for missions in which SINCGARS radios are the standard. There is a major shortfall in Nuclear, Biological and Chemical (NBC) equipment to include reconnaissance and decontamination systems. We must ensure that our soldiers have the highest level of force protection by fielding them with modernized systems.

Impact of Full-time Support (FTS) Personnel Shortage

One of our greatest challenges today is the insufficient number of military maintenance technicians. The fielding and influx of complex weapon systems coupled with increased mission support requirements and deployments challenge the ARNG's sustainment abilities. Currently, the military maintenance technician authorized fill is approximately 56 percent of fiscal year 2001 requirements. As a result, maintenance backlogs, specifically with auxiliary equipment, delayed services and maintenance of equipment in lower priority units, continues to escalate. Additionally, our unit commanders continually express concerns that the shortage of Full Time Support (FTS) has a negative impact on unit readiness. Lack of FTS has an adverse

affect on the quality of life for our soldiers, which in turn impacts both recruitment and retention. Further, insufficient FTS is impacting our ability to maintain and sustain our equipment at the highest possible state of readiness.

Tiered Resourcing

During fiscal year 2001, the ARNG continues to use a tiered resourcing model to manage its overall readiness. By prioritizing its limited resources, our "First to Deploy" forces have the capability to meet the CINC's required arrival timelines into the theater of operation. This resourcing strategy ensures our early deploying units meet Defense Planning Guidance deployment criteria. Additionally, with resource tiering, our high priority units receive the resources necessary to meet operational readiness requirements; and lower priority units, like our eight combat divisions, are resourced to meet a baseline of minimal readiness goals. The impact of tiered resourcing on later deploying forces is severe and it should be noted that ARNG units identified as "later deploying" have already been deployed in large numbers.

Missioning Army National Guard Combat Formations

"It's about readiness," said Chief of Staff of the Army (CSA) General Eric K. Shinseki, announcing a new concept called "corps packaging" in a Sept. 14, 2000 speech at the National Guard Association conference.

The concept has all of the National Guard's eight combat divisions and 15 enhanced Separate Brigades (ESBs) matched with active component divisions at the corps level. A corps is the largest combat organization in the Army. Corps packaging will focus Guard training on specific potential wartime missions such as rear-area combat operations in a major conflict in the Persian Gulf, reinforcement of U.S. forces on the Korean peninsula or filling in for active-duty units in Germany that might be sent to fight elsewhere.

"A year ago, we committed to integrating the force, to determining the strength of each component, and to leveraging those contributions," Shinseki said. "We have come a long way in active component/reserve component integration thanks to the leadership in all components—but we are not fully there yet. We will continue our work with the CINCs to mission our reserve component, especially our National Guard units, for appropriate tasks in their war plans."

The change does not make National Guard divisions a part of the Pentagon's official war plans, which are written by the commanders in chief, or CINCs, of combat commands. Shinseki said the next step is for the CINCs to designate Guard units for specific missions in their war plans.

The CSA also approved all ARNG combat maneuver forces under one of the four Army corps. This step will greatly enhance mission focus. The Army also supported a change to the Joint Strategic Capabilities Plan (JSCP) that recommends the single apportionment of all 15 eSBs and the apportionment of six ARNG divisions to a combatant command. The Chairman, Joint Chiefs of Staff (CJCS) has directed support of the apportionment of the ARNG divisions.

Based on Joint Strategic Planning System (JSPS) requirements, ARNG divisions perform a number of missions in support of CINC requirements. Generally contributing to one or more of five mission areas, ARNG combat formations reinforce. The potential missions associated with these areas include: Major Theater of War (MTW), MTW backfill, Small Scale Contingencies (SSC), Base Generating Force, Theater Engagement, Civil Support and Strategic Reserve.

The MTW mission is the mission most recognized for ARNG combat formations. The mission can generally be broken into three areas: rear area operations, combat operations and post-hostility operations.

ARNG divisions may also be used in forward deployed theaters to provide security and force protection for dependents and installations. ARNG divisions could be designated to backfill forces engaged in SSCs, allowing those formations to flow to an MTW.

The range of missions within the SSC framework is extremely diverse. SSCs are projected to continue in the future at the tempo of the last 10 years.

ARNG divisions may be required to provide capabilities at designated Warfighting Centers (WFCs). Providing for opposing forces (OPFOR) and observer/controllers (OCs) are missions well suited for them.

Missioning Studies

The Secretary of Defense directed study on Reserve Component Employment 2005 (RCE–05) concluded that an ARNG division can be ready to deploy for any combat mission in about 150 days.

The Joint Staff (J7) has been analyzing CINC shortages in the pursuance of their MTW missions. This study substantiated the CINC's shortfalls in Combat, Combat

Support and Combat Service Support units. The Army's ability to offset some of these critical shortfalls resides in the unmissioned ARNG divisions.

The fiscal year 1998 Joint Strategic Capabilities Plan dual apportions the eSBs to both Warfighting CINCs and their respective contingency plans. The goal of The Army is to single apportion all 15 eSBs and to package them with AC Corps. The ARNG continues to intensively manage these units through priority of resourcing, scheduled video teleconferences, state assistance visits and ongoing readiness analysis.

The Army National Guard (ARNG) Medical Force in the 21st Century

The ARNG Surgeon's office fosters an integrated medical readiness team that provides innovative leadership in a dynamic environment, ensuring that ARNG forces are ready and deployable for federal, state and community missions.

A significant impact on ARNG medical readiness was the inception of the Medical Advisory Council (MedAC), comprised of the 50 state and three territory surgeons. The council provides advice, assistance and proposes actions to the ARNG chief surgeon on current and future medical issues affecting readiness, policy, plans, programs, resources, training and operations of ARNG units and soldiers. Within the first year of its charter, the council had proven itself an invaluable tool for promoting the medical readiness of the ARNG soldier.

One of the council's early projects was the initiation of the ARNG Medical Readiness Campaign Plan 2000. The campaign plan was a coordinated effort between the ARNG Surgeon's Office and the MedAC to address and resolve ARNG medical readiness issues. Initiatives included developing a tracking system for Individual Medical Requirements (IMR), improving medical and dental support for annual training, redesigning the state medical Table of Distribution and Allowances (TDA), improving the ARNG Aviation Medicine Program, enhancing medical strength in ARNG force structure, and developing a strategy for the health care specialist (91W) transition.

To ensure comprehensive tracking, the ARNG will use the Medical Protection System (MEDPROS) to monitor the IMR requirements for all ARNG soldiers. This will provide the ARNG senior leadership with a real time automated system capable of tracking individual medical readiness.

An evolving state medical TDA redesign will heighten the focus of our ARNG medical personnel on the future medical readiness needs of the ARNG.

Another initiative of the MedAC was to tackle the challenge of providing quality health care to ARNG soldiers by designating a state aviation medicine officer and a state annual training site support coordinator. These individuals serve as the liaison between the state surgeon and the aviation and training communities. These designations, seen as a milestone, ensure our soldiers are afforded the most comprehensive and quality medical and dental support during training.

To meet the needs of tomorrow's battlefield, the MedAC sanctioned an aggressive training strategy to ensure that all ARNG combat medical specialists (91B) and practical nurses (91C) will meet the Army mandated transition to being Emergency Medical Technician (EMT) qualified (91W) by Oct. 1, 2009.

To ensure ARNG soldiers are medically ready to deploy when called upon, the ARNG assisted with the implementation of the Federal Strategic Health Alliance Program (FEDS–HEAL) and the HOOAH 4 HEALTH (H4H) program. FEDS–HEAL is a coordinated effort between the ARNG, U.S. Army Reserve (USAR) and the Veterans Administration (VA). Program officials have a memorandum of understanding with the VA and the Federal Occupational Health (FOH) network to assist the ARNG in accomplishing IMR readiness requirements. Initiated as a multi-component effort, HOOAH 4 HEALTH is a web-based, self-directed health promotion and wellness program designed for the Reserve Components. The program focuses on body, mind, spirit, environment, prevention and stages of change.

Today's ARNG Medical Team remains a value-based, soldier-focused organization. The ARNG Medical Team is committed to enhancing the readiness of The Army and the well-being of our soldiers and their families.

SUSTAINING THE FORCE

Operational Tempo (OPTEMPO) Funding

Resources for training are based on a model that applies costs of operating equipment systems to a training strategy calculated in miles or hours, depending on the system. Units expend these resources for soldier training support, repair parts, fuel and other related costs of training. Current ARNG separate brigades are trained to platoon level; divisions to individual, crew, and squad level; and CS/CSS units to unit level. The ARNG goal is to resource all combat units at the platoon level. Overall funding for OPTEMPO must increase by $86 million over the next five years to

support this strategy; however, as more ARNG divisional units assume command and operational roles in Bosnia, Kosovo and elsewhere, they must train to higher levels.

Asset Redistribution

In order to mitigate aging equipment and material shortfalls, the ARNG executes a sophisticated program of redistributing items from excess in one unit to units in needs. The managers utilize two ARNG automated programs to support this effort with 90 percent of the transactions completed without item manager intervention. The ARNG has been able to avoid millions of dollars in unnecessary purchases by filling shortages in one state from excess in other states.

Controlled Humidity Preservation (CHP)

Another initiative undertaken by the ARNG involves the use of Controlled Humidity Preservation (CHP) techniques. This technology has resulted in an offset of unfinanced levels of maintenance support and reduced the effects of moisture-induced corrosion on ARNG equipment. The ARNG began implementation of its CHP program in 1994 to contend with declining materiel readiness caused by equipment exposed to the environment during periods of non-use. Since its initial implementation, the ARNG CHP program has stabilized equipment readiness rates in the face of increasingly scarce resources. By preserving operational equipment under humidity controlled conditions, CHP offsets a portion of the required maintenance manpower and OPTEMPO funding requirement; thus resulting in a cost avoidance against the unfunded requirements. The ARNG CHP program has validated a return on investment of better than seven to one on the original investment.

In fiscal year 1998, the ARNG was designated as the lead agency for CHP implementation Army-wide. It is currently available in 35 locations. Fielding plans include CHP for most ARNG states and territories by fiscal year 2008.

Velocity Management

Velocity Management (VM) is an Army process designed to improve logistics responsiveness both in garrison and when deployed. The program objective is to decrease reliance on stockpiled commodities and rely on automation, speed, and transportation to move logistics support into the hands of soldiers as rapidly as commercial activities. Implementation of VM has assured effective supply performance by finding and eliminating sources of delay and unreliability in The Army's logistics processes. States are using VM, resulting in reduced ARNG order/ship time from a program initiation high of 98 days to 35 days, with at least 15 states posting 24 days or less every month. Repair part receipt processing times have decreased from a high of 42 days to 15 days.

Single Stock Fund (SSF) Initiative

Single Stock Fund (SSF) is a Department of the Army (DA) business process engineering initiative to improve and streamline The Army's logistics and financial processes for classes of supply.

The implementation of the SSF is progressing in four phases or milestones (MS), beginning in January 1998. Completion is scheduled for June 2002.

MS–0, which was the preparation phase prior to implementation of MS–1 in fiscal year 2000, included a combined MS 1 & 2 demonstration, in which the two Kansas ARNG Centers of Excellence (COE) successfully participated in validating the ARNG's ability to repair and stock assets for the NMM program.

MS–1 & 2, theater and corps/installation Authorized Stockage List (ASL) assets and Operations & Maintenance (O&M) stocks, above the division ASL, are to be incorporated (capitalized) under AMC's management. The Army's new credit policy goes into effect at this point, and 18 ARNG Integrated Sustainment Maintenance (ISM) COEs will become part of AMC's NMM program. The COEs' work will expand beyond repairing to include stocking and shipping repaired AWCF assets to worldwide customers. The schedule for implementation was Nov. 1, 2000 (fiscal year 2001). At this point, each United States Property and Fiscal Office (USPFO) will begin operating an AWCF SARSS–1 and the ARNG will be fully integrated into the SSF.

MS–3 is scheduled for implementation starting Oct. 1, 2001 (fiscal year 2002). In preparation for SSF implementation, the ARNG plans for two states to participate in the MS–3 implementation demonstration.

To implement SSF, the ARNG will experience required cultural, procedural and systemic changes. Some of the ARNG processes currently under revision to accomplish SSF transition include direct funding and credit (greater credit to buy more and repair less); AWCF–SMA ASL ownership (greatly reducing the amount of ARNG capital invested); and CTASC reduction (reduction in cost and duplication of

automation assets). The ARNG directorate staff continues to work closely with DA, AMC, other MACOMs and the states to facilitate a smooth transition to SSF.

National Maintenance Management (NMM) in the ARNG

The ARNG has participated with other Major Commands (MACOMs) in The Army's Integrated Sustainment Maintenance (ISM) program since its Proof of Principal (POP) in fiscal year 1993. In this program, AC installation General Support (GS) maintenance activities—named Centers of Excellence (COE)—of FORSCOM, TRADOC, USAR, and ARNG Combined Support Maintenance Shops (CSMS) and Maneuver Area Training Equipment Sites (MATES) with support (also known as COEs), competed for component repair work.

The final fiscal year 2000 figures from the ARNG's participation in the ISM program are impressive. Thirty-eight states participated as customers during the fiscal year. Those states shipped 7,632 General Support Repairables Exchange (GSRX) components to other ARNG, USAR and AC COEs for repair. The COEs logged more than 40,000 hours in the repair of those components and returned 6,563 for customer use. Their work resulted in a cost avoidance of $20.7 million for their customer states as well as considerable productivity enhancement at customer shops, where mechanics were freed up to work off backlogged items and other readiness issues.

The program's growth can be appreciated by comparing this year's cost avoidance of $20.7 million, with the $8.2 million realized in fiscal year 1998. As the program became institutionalized in fiscal year 2000, the ARNG conducted thousands of repairs on as many as 119 different components throughout the year—a 48-item component increase over the previous year. Additionally, ARNG COEs performed "Area" work (not part of the Regional ISM program), for other ARNG customers, repairing 58 other types of components not part of the ISM program.

As The Army entered into its first phase of the Single Stock Fund (SSF) program this year (specifically, restructuring), ISM as we knew it, changed to a program named National Maintenance Management (NMM). The NMM remains a "Repair and Return to User" service until AC Installation supply assets are capitalized during the first half of fiscal year 2001 as part of SSF transition. The NMM program will then change to one of repair for the supply system. Eighteen ARNG COEs will repair a total of 72 component lines during fiscal year 2001, while continuing to work for ARNG customer states and AC installations until they are capitalized. The ARNG continues to work closely with DA, Army Materiel Command and other Army MACOMs, to make this transition successful.

Depot Maintenance

The ARNG depot maintenance program is based on a "repair and return to user" premise. Unlike the Active Component (AC), the ARNG does not have a quantity of selected end items authorized for stockage to use as immediate replacements by units when critical equipment is returned to the depot for repair. This means ARNG equipment, necessary to meet deployable readiness goals, returned to the depot for repair is not replaced in the unit until the depot repairs the item.

Requirements (items sent to be repaired) in fiscal year 2001 for the overall depot maintenance program increased by 18 percent. This requirement increase was attributable primarily to an increase in ARNG aviation modernization programs and increased test standards. Yet funding for the ARNG's depot maintenance requirement slightly decreased from 79 percent in fiscal year 2000 to 74 percent in fiscal year 2001. Depot maintenance programs for enhanced Separate Brigades (eSBs) have continued to be funded at 80 percent of requirements. However, funding for the ARNG divisional units has decreased from 78 percent in fiscal year 2000 to 70 percent in fiscal year 2001.

Previous low levels of funding resulted in a backlog of unserviceable equipment that must be supported. A depot maintenance backlog decreases the ARNG's capability to meet assigned materiel readiness goals, decreases the quantities of serviceable equipment available to support ARNG training programs, and impairs the ARNG's capability to rapidly mobilize and deploy high priority units.

Maintenance of adequate resource levels on an annual basis is essential to overall ARNG readiness. The ARNG depot maintenance program has received significantly increased funding in the last three Program Objective Memorandum (POM) cycles, but even this funding has not kept pace with the increased use of depot level maintenance by the ARNG. These resources will assist in AC/RC integration, compliment the readiness of units, and serve to decrease the ARNG backlog of unservicable equipment. Depot level maintenance of aging ARNG equipment is the key to obtaining the highest possible level of ARNG equipment readiness.

Readiness Sustainment Maintenance Sites (RSMS)

Five Readiness Sustainment Maintenance Sites (RSMS) have been established by the ARNG to repair trucks, trailers, and electronic equipment. Four sites specialize in refurbishing HMMWVs, five-ton cargo trucks, tractors, wreckers, HEMTTs, 10-ton tractors, trailers that are pulled by a fifth wheel, and bulldozers. The fifth site repairs night vision devices and generators.

The decision to develop repair sites was based on past experience which showed the ARNG saved scarce funds by completing the work in-house and produced a quality product. A by-product of these programs demonstrated that they were excellent recruiting and retention tools for ARNG soldiers.

RSMS sites are located in Kansas, Mississippi, Texas, Maine, and Oregon. All five sites performed work for the ARNG before being selected as an RSMS.

Acquisition Career Management

The ARNG Acquisition Career Management Branch (ACMB) was established in August 2000 to ensure that the ARNG has a trained and qualified workforce fully integrated into the Army Acquisition Workforce and Corps. The objective is to develop and manage the ARNG acquisition workforce so that it is capable of supporting the ARNG and the Active Component (AC) during peacetime, contingency operations and mobilizations. The goal is to become a full and equal partner with the Army Acquisition Workforce and Corps not later than fiscal year 2004.

Phase I of the partnership program (fiscal year 2000 through fiscal year 2001) began with the establishment of the ARNG Acquisition Career Management Branch and the determination of an initial baseline for the ARNG Acquisition Position List (APL). The baseline results indicated that approximately two-thirds of the possible ARNG acquisition positions were not accounted for on the current APL. The ARNG ACMB devised a plan to document these positions and update the Acquisition Career Management Office (ACMO). An APL database has been established and will be completed not later than the end of fiscal year 2001.

During Phase II (fiscal year 2002) of the program, the ARNG ACMB will obtain and manage Title 10 authorizations for ARNG acquisition positions.

Phase III (fiscal year 2003 through fiscal year 2004) is the final portion of the program. During this time, the ARNG ACMB will conduct annual data-calls to identify both civilian and military positions that are ARNG acquisition positions for the Civilian Acquisition Priority List (CAPL) and Military Acquisition Priority List (MAPL). Both are currently consolidated on the APL.

RESOURCING THE FORCE

The resourcing goal of the Army National Guard (ARNG) is to secure sufficient funding, enabling the organization to meet all statutory and critical requirements. The ARNG also strives to provide trained and deployable forces for The Army and Commanders in Chief (CINCs). Our intent is to achieve parity within each Force Package for all Army components.

Funding Priorities

The ARNG Force Support Package (FSP) units receive the highest funding priorities. Combat Support (CS) and Combat Service Support (CSS) units primarily comprise the ARNG's portion of the Force Support Packages. Consistent with the National Military Strategy, these units are doctrinally aligned to support the Major Theater War strategies. The precise purpose of the FSP is to provide the necessary CS and CSS units. These are found in Echelons Above Division (EAD) and in Echelons Above Corps (EAC) tailored to support 5 1/3 Continental United States (CONUS) divisions, one corps, one corps planning headquarters (HQ), one theater, and one theater planning HQ.

Budget Appropriations

The ARNG is funded in three appropriations: National Guard Personnel, Army (NGPA), Operations and Maintenance, Army National Guard (OMNG) and Military Construction, Army National Guard (MCNG). The fiscal year 2001 President's Budget, $6.9 billion, represents approximately 9.7 percent of The Army's $70.8 billion budget.

The ARNG has requested an increase in funding in the fiscal year 2002 budget which supports the ARNG's Transformation and teaming effort with the Active Component (AC), increased Operational Tempo (OPTEMPO) and Personnel Tempo (PERSTEMPO) requirements in the 21st century.

Funding Contingency Operations

The ARNG is a true stakeholder in The Army's transformation. We have been called upon to provide an increasing number of soldiers and units each year to support The Army's role in contingency operations. ARNG soldiers are primarily supporting missions in Bosnia, Kosovo and Southwest Asia. During fiscal year 2000, the ARNG deployed 2,932 soldiers for Contingency Operations (CONOPS) missions. Projected deployment figures for fiscal year 2001 are expected to more than double, with an estimated 5,815 ARNG soldiers supporting these overseas missions.

Funding for Contingency Operations is provided from Congress as part of the Department of Defense (DOD) Overseas Contingency Operation Transfer Fund (OCOTF). This fund is only to be used to finance incremental costs of contingency operations when operational costs (including personnel related costs) incurred by an activity would not have been incurred if the operation had not been executed.

OCOTF funds are transferred directly to National Guard military pay appropriations (NGPA). These funds are subsequently distributed to the states for all incremental pre-mobilization, post-mobilization, and reconstitution activities necessary to prepare for and recover from deployed operations. While deployed, National Guard soldiers are mobilized in a federal status and paid from active duty military pay accounts.

Incremental military pay funding is also required for the additional soldiers that must round out State Headquarters, State Area Commands (STARCs) and units in an Active Duty Special Work (ADSW) status to support the unit deployment. The majority of states deploying are only manned on a full time basis (between 40 percent to 60 percent) to support normal state training requirements.

The states receive active duty Operations and Maintenance funds, on a reimbursement basis, from the Active Component Corps Force Provider for incremental operations costs and travel while preparing for and recovering from deployed operations.

Incremental funding received in fiscal year 2000 and requested funding for fiscal year 2001 NGPA is shown below.

OVERSEAS CONTINGENCY OPERATIONS TRANSFER FUND (OCOTF)

[In millions]

	Fiscal year 2000	Fiscal year 2001 [1]
Military Pay (National Guard Pay and Allowances)	$14	$34.5

[1] Estimated as of September 2000 based on known missions.

KNOWLEDGE INFRASTRUCTURE

We are at the crossroads of a unique period in our history, the Department of Defense (DOD) has developed a new corporate vision designed to carry us well into the 21st century. Central to that vision, and in an attempt to provoke change, DOD seeks to take advantage of technological breakthroughs that rely on the total force, which includes the Army National Guard (ARNG). At the core of the Defense Reform Initiatives are principles which include streamlining the organization and exploiting information technology.

The DOD will seek to further streamline its business processes and operations in the upcoming Quadrennial Defense Review (QDR). The Army has already undergone change resulting from implementing The Army Transformation Strategy. In both cases, information technology is the tool that enables DOD and The Army to conduct business more effectively and efficiently. By successfully applying information technology, we can become more effective and relevant in a period of diminishing resources.

Consequently, the ARNG is shaping its organizational future by capitalizing on information technologies and solutions that will play a key role in meeting the challenges of The Army Transformation Strategy, the Quadrennial Defense Review, and the Defense Reform Initiatives. The Army National Guard has crafted a knowledge infrastructure campaign plan to support the orderly transition to a Distributive Learning network that will extend to major state facilities disbursed networks. The ARNG seeks to achieve its dual federal/state mission in the most effective, efficient and productive manner possible using Information Technology solutions wherever possible.

Information plays a key role in our national defense. The information revolution is creating a parallel revolution in military affairs that will fundamentally change the way we fight.

Joint Vision 2020

Joint Vision 2020 examines the world and its concomitant emerging national security challenges—challenges that span the spectrum from humanitarian disasters to major theater wars. Joint Vision 2020 recognizes that our military forces must possess seven key characteristics to meet these challenges in a way that provides our National Command Authorities a variety of strategic options. These characteristics are responsiveness, lethality, survivability, sustainability, deployability, agility and versatility.

The Army Vision provides direction, focuses on the change process and moves us along the path to develop forces that can dominate any situation across the spectrum of operations. Embracing the central role of information technology through its knowledge infrastructure efforts, the ARNG is fully committed to taking advantage of opportunities provided by information age concepts and technologies.

The ARNG has devoted considerable effort in the past two years to increase high-speed Internet access. Recently, the ARNG significantly increased the available bandwidth, or allowable data flow, to the national communications network (NIPRNET). Three of the seven ARNG Network (GuardNet) centralized distribution points or hub sites now have more than triple the amount of allowable data flow. The remaining four hub sites will be connected to the NIPRNET in the fall of 2001, thus resulting in improved Internet access. High-speed information access will make significant contributions to such areas as Distance Learning (DL), electronic publications and forms, training simulation and World Wide Web technology applications.

The ARNG decentralized video teleconferencing to the state level in January 2001 by installing equipment that will allow states to have local control over their video teleconferencing. Video teleconferencing is currently centralized at the national level in Arlington, Va. States must work through the Video Operations Center at the ARNG Readiness Center to plan and conduct their local events.

One other significant upgrade to the ARNG's knowledge infrastructure includes the addition of a Storage Area Network Solution, which provides a robust, flexible and scalable option for back-up and continuity of operations. Constant mirroring of data provides a means to rapidly regain full capability in the event of a major system failure.

Data Sharing and Integration

The Personnel Division of the ARNG recently installed an upgrade to the computer software that processes the new Officer Evaluation Reporting (OER) system. This improvement in computer software will allow the transfer of OER images directly to the Personnel Electronic Records Management System (PERMS) located in the ARNG Readiness Center. Once the national-level OER analyst processes an OER, the new computer system automatically transfers the image of the OER directly to PERMS.

When fully functional, this new transfer process will eliminate the need for the state-level OER analyst to provide paper copies of OERs to PERMS. This will allow PERMS and OER analysts more time to perform analytical tasks. As a result, OERs are scanned once instead of twice, and paper copies will be a thing of the past. This endeavor supports the federal government's initiative to transform itself into an electronic or paperless organization, which is a more fiscally and environmentally sound form of government.

Other major improvements over the year include:

—Overhauling the database, which led to an overall decrease in the time it takes an analyst to examine and process an OER.

—Automated monthly updating of OER personnel information from the Total Army Personnel DataBase (TAPDB).

—An auxiliary program was created allowing OER national-level analysts to correct the more common OER errors themselves rather than taking it to the OER system programmer.

—All OER personnel were issued the TAPDB program to allow them to instantly look up Guard personnel information rather than having to consult the registry or contact the soldier's state.

National Officer Personnel Electronic Records Management system (PERMS)

Electronic imaging of officer records continues to remain a high priority. Continuous improvements are being made to the system, to include an initiative that will allow the system to internally determine certain data fields for commonly used forms.

The Networked Attached Storage (NAS) system is the most recent PERMS enhancement. This new release consists of new and modified software that uses NAS as the primary repository for PERMS documents versus optical platters (the equivalent of a giant CD–ROM.) Retrieval applications will be written to NAS, as well as to optical platters. The user's benefit of the NAS system is to provide faster document retrieval and to minimize performance degradation such as fuzzy or illegible documents.

State Enlisted Personnel Electronic Records Management System (PERMS)

Each state and territory has been provided the means to make electronic images of enlisted members' official military personnel files. The implementation by the states has been sporadic due to fiscal constraints. The Department of Defense has taken an interest and is trying to find funding to improve the functions of PERMS at the state level since many organizations, including the Veteran' s Administration, have a need to access enlisted records.

Enlisted PERMS at the state level remains an issue of concern. The imagery systems purchased by the states do not interact with national PERMS. Until funding is procured to enhance and improve PERMS at the state level, enlisted records will continue to be difficult to access by any entity. The states continue to rely heavily on hard copy enlisted personnel records.

Electronic e-orders

The Federal Recognition Section, ARNG Division of Personnel, is responsible for producing special orders that extend or change federal recognition of an ARNG soldier's promotion, transfer, discharge, and changes in Military Occupational Specialty (MOS) or branch. About 13,000 of these actions are processed each year. While the production process was partially automated, it still relied on a manual distribution process. These orders had to be copied and properly cleared to ensure that Privacy Act provisions were not violated, and finally distributed. This manual process was subject to human and distribution error due to the number of times the orders were handled before reaching their final destination.

In July 2000, electronic orders made their debut at the ARNG. Electronic orders are images of the orders that are created at the time the paper copy of the order is produced. A unique electronic order is created for each individual officer listed on the order showing only his or her social security number. These electronic orders are then distributed to the Military Personnel Officers (MILPOs) of the 50 states, three territories and the District of Columbia who have an officer on the order using an email distribution system. The MILPO simply clicks on the attachment to the email to view and print the electronic order. Electronic orders cut the time of distribution of orders from weeks to minutes.

Improvements in the federal recognition database now allow electronic distribution of federal recognition orders rather than the need to copy and mail paper copies.

Software Development

Our software development effort continued expanding its use of structured engineering methodology during fiscal year 2000. This methodology utilizes industry standards for specifying, visualizing, constructing, and documenting the artifacts of software systems. It simplifies the complex process of software design by making a blueprint for construction. From these blueprints, reusable software components/modules can be constructed. This expansion enforces the use of business rules and data integrity, and is platform and database independent. In addition, work toward obtaining software Capability Maturity Model Level 11 was initiated. This will put in place an effective means for modeling, defining, and measuring the maturity of the software development process.

The ARNG also began developing a single repository to store objects and components for reuse in future application development. An integrated process team is working on the standards and business rules for establishing the repository and regulating the processes for adding, deleting and modifying information contained in the repository.

Communications—Plans and Operations

During fiscal year 2000, the Network Operations Center (NOC) located at the ARNG Readiness Center fielded several key enterprise-wide systems to enhance security, facilitate central monitoring and improve Internet response times. Each state and territory received new routers designed to speed up the overall data traffic transmission via the GuardNet. These new routers are more robust and help to minimize the network errors that were experienced in the past.

Additionally the Computer Emergency Response Team (CERT) procured and deployed a new Intrusion Detection System (IDS). Currently, three Defense Information Systems Agency (DISA) Point-of-Presence (POP) are fully configured and operational with the IDS. The CERT team also streamlined the Information Assurance Vulnerability Assessment Message (IAVA) reporting process, established two virtual private networks (VPNs) and set up the Central Clothing Distribution Facility (CCDF) firewall.

The NOC also dramatically enhanced its ability to monitor and centrally manage GuardNet through its build-out project. This project included the procurement and implementation of several new powerful software tools that provide proactive monitoring of the network, reduce possible bottlenecks, and improve bandwidth capacity planning and trouble ticket tracking.

Additionally, the NOC upgraded eight servers that enhanced capabilities in providing exchange and file server support. During this past fiscal year, two Storage Area Network (SAN) devices were purchased and deployed, which has greatly contributed to our flexibility in meeting the users' common storage area needs.

Video Teleconferencing

The ARNG Video Operations Center has undergone several upgrades during the last year to include an additional video conferencing bridge, which provides the ability to coordinate and facilitate 80 site conferences over GUARDNET XXI. We will continue to support interactive video network conferencing for Weapons of Mass Destruction, the Unit Clerk Course and the Personnel Sergeant's Course, involving 30 to 40 sites for each event.

The facility provided video conferencing capabilities for Texas ARNG soldiers during their deployment to Bosnia from April to October 2000. This was the largest morale call conducted for the Texas ARNG soldiers and their families. It was a reoccurring event with six to eight conferences scheduled per month with eight-hour sessions. Other ARNG units—Indiana, Oregon, Washington and Oklahoma—have also provided video conferencing capabilities for morale calls during their deployment to Bosnia. This video conferencing service was a great morale booster for soldiers placed in a stressful and unfamiliar environment.

Reserve Component Automation System (RCAS)

The Reserve Component Automation System (RCAS) is an automated information system that provides The Army the capability to administer, manage and mobilize Army National Guard (ARNG) and Reserve forces more effectively. The RCAS provides an integrated capability that supports mobilization and improves day-to-day administration and management of Reserve and Guard forces. Fully deployed, RCAS will link approximately 10,500 Guard and Reserve units at approximately 4,000 sites located in all 50 states, three territories and the District of Columbia.

RCAS is being developed and fielded using an incremental, evolutionary acquisition strategy.

Increment 1 was approved for fielding in September 1996 by the Office of the Secretary of Defense (OSD). This provided the program's infrastructure through wide area network (WAN) inter-connectivity, COTS office automation software, and classified capable and unclassified workstations. Fielding of Increment 1 goes through mid fiscal year 2001, due to the funding profile.

Increment 2 was approved for fielding in January 1998 by OSD. This introduced data servers and logistics applications. Release 2.1, fielded in September 1998, provided logistic "smart" forms, Army Training Requirements Resources System, Emergency Information System, COTS upgrades, software encryption (e-mail), Clipboard, and Program Automator (internal review).

Increment 3 was approved for fielding in March 2000 by OSD. This added force authorization, security and training functionality.

Increments 4/5 is in the final stages of operational testing and includes logistics, safety/occupational health, training and human resources applications.

Increment 6 will add or enhance safety/occupational health, security, force authorization, and human resources applications with operational testing planned to begin in June 2001.

Future increments will satisfy users' requirements in the order of priority established by the ARNG and USAR. The project is on schedule and experiencing favorable cost variance.

More than 60 percent of the 60,065 planned function points have been delivered to date. Full fielding is on schedule with 53,367 out of more than 56,000 personal computers fielded (95 percent), 58 out of 94 commands completed (62 percent), and 3,440 of 3,849 (89 percent) sites completed to date.

—Reduced time to publish orders from 60 days to two days; reduced mailing and printing costs by 40 percent.
—Mobilized units in Bosnia using e-mail to correspond with their home units and State Area Commands (STARC).
—E-mail provided command and control of disaster operations during Midwest floods.

An example of RCAS improvements—a total of 1,900 ARNG soldiers were issued orders in four days versus 30 days and were paid for their service in record time; seven days versus 30 days.

RCAS teamed with the National Guard Distributive Training Technology Project (DTTP) to migrate ARNG State Area Commands to an Asynchronous Transfer Mode (ATM) backbone. The two programs are maximizing the synergistic benefits of this arrangement and realizing economies of scale associated with circuit cost and usage ratios.

TRAINING THE FORCE

Army National Guard (ARNG) Support to the Combat Training Centers

The ARNG participates in all of the Army's Combat Training Centers (CTC); the National Training Center (NTC), Fort Irwin, Calif.; the Joint Readiness Training Center (JRTC), Fort Polk, La.; the Combat Maneuver Training Center (CMTC), Hohenfels, Germany; and the Battle Command Training Program (BCTP), Fort Leavenworth, Kan. The Brigade Command and Battle Staff Training (BCBST) Program is a subset of BCTP. The Army CTC Program is divided into live simulation (NTC, JRTC, and CMTC) and constructive simulation (BCTP and BCBST). The ARNG CTC Program involves the scheduling of ARNG units to conduct training at the CTCs in the following capacities: Blue (Friendly) Force (BLUFOR) rotational units, Opposing Forces (OPFOR) augmentation units, and other types of support based on the needs of the CTCs.

The National Training Center (NTC) is the Army's premier heavy maneuver CTC. As large as the state of Rhode Island, the fully instrumented NTC allows live brigade-level force-on-force exercises to be conducted several times each year.

The ARNG continues to increase its training frequency at the NTC with more than 25,000 ARNG soldiers conducting BLUEFOR and OPFOR rotations in fiscal year 2000. The ARNG completes one brigade NTC rotation each year. Rotations are allocated to the eight mechanized infantry/armored enhanced Separate Brigades (eSBs), making the rotation schedule once every eight years for each brigade. Additionally, the ARNG conducts OPFOR Augmentation Unit (OAU) rotations in support of the 11th Armored Cavalry Regiment, the NTC's world class OPFOR. Ten ARNG company-sized units deployed to the NTC in fiscal year 2000 to conduct OAU missions, eight in support of Active Component (AC) units.

The 218th eSB, South Carolina ARNG, conducted the ARNG rotation in fiscal year 2000 and the 256th eSB, Louisiana ARNG, will deploy to NTC later this year.

In addition to unit-based NTC rotations, the ARNG also receives and allocates eight NTC Leader Training Program (LTP) rotations annually. The LTPs are six days in length, and enhance staff coordination and combat decision-making skills. The eight LTPs are allocated to heavy brigades that attend NTC.

The Joint Readiness Training Center (JRTC) is the light infantry equivalent of the Army's NTC. The JRTC hosts light infantry and special operations forces from all military components for rotations throughout the year. The ARNG conducts one brigade rotation at the JRTC every year. The rotations are allocated to the seven light infantry eSBs. The 76th eSB, Indiana ARNG, conducted the fiscal year 2000 JRTC rotation and the 27th eSB, New York ARNG, is scheduled to deploy in August of 2001.

The ARNG receives and allocates three JRTC LTP rotations annually. As with the NTC, training opportunities exist for Combat Arms, Combat Support (CS) and Combat Service Support (CSS) units to augment BLUEFOR and OPFOR units and to provide installation support.

The ARNG will participate in the vast majority of BCTP exercises in the future. ARNG units, including division headquarters, brigade and battalions, conducted BCTP rotations in support of AC units at unprecedented levels in fiscal year 2000. The 28th Infantry Division, Pennsylvania ARNG, participated in the V Corps BCTP Warfighter exercise in fiscal year 2000 with more than 500 soldiers deploying to Germany for the exercise.

Fourteen ARNG brigades conducted BCBST rotations in fiscal year 2000. The BCBST Program requires brigade staff personnel to deploy to the Leadership Development Center at Fort Leavenworth, Kan., to conduct a Warfighter seminar and hone mission planning skills. The brigade then conducts a Warfighter exercise at

home station using Brigade Battle Staff simulation software exercising brigade battle staff skills.

FORSCOM/ARNG/USAR Regulation 350–2 provides for increased ARNG participation at all CTCs and with our AC counterparts. Units can conduct rotations as either BLUEFOR or OPFOR during both AC and ARNG rotations at the NTC and JRTC. Operational deployments have created a greater reliance on the ARNG to support AC units in many training events. Participation of the ARNG in the myriad training events showcases the maturation of reserve component integration and the warfighting capabilities of the ARNG.

The Chief of Staff of the Army's emerging corps packages and the ARNG's role in the Army Transformation process promises significantly greater opportunities for ARNG participation in Active Component CTC exercises world-wide.

Distributed Learning

Distributed Learning (DL) has emerged over the last few years at the forefront of training, education and information access. DL is the dominant trend in Army National Guard (ARNG) training, and it has the potential to improve readiness above historical averages. The communication technologies necessary to support DL are having a major impact throughout the ARNG because they bring greater access to information. Greater access to information will improve training and operations.

A major objective towards improving readiness is to shift from traditional resident training to greater reliance on DL. Making more training locally available will reduce a significant obstacle: the limited time a soldier has available to accomplish training. Resident training will remain as the appropriate method for initial entry, leadership and equipment-intensive training, since these types of training are not suitable for DL.

The primary goal of DL in the ARNG is to improve readiness by providing local access to training and education—anytime or anywhere. Improving command and control and providing shared use of ARNG DL facilities with local communities are also significant goals. The strategy to reach these goals is based on developing and synchronizing five essential components: hardware (network and classrooms), courseware, staff and faculty training, support services and business operations.

Imperative to the success of DL is GuardNet XXI. This is a robust and dynamic telecommunication infrastructure that consolidates and upgrades voice, video and data requirements in one economical and highly efficient integrated network. GuardNet XXI connects the National Guard Bureau (NGB) with State Area Commands (STARCs). The National Guard Distributive Training Technology Project (DTTP) expands this network through the installation of DL capable classrooms at ARNG training sites, readiness centers and surrounding communities. As part of Army DL classroom requirements, DTTP has fielded 207 DL classrooms to date, with an end state approaching 400 classrooms by fiscal year 2004. Emerging missions and requirements may expand the infrastructure beyond the current projections. Future programs will expand the delivery options to the soldier's location whether at home, in a vehicle, or deployed to another country.

Traditional resident courses must be redesigned for delivery via DL. The Army Distance Learning program calls for the redesign of 525 Duty Military Occupational Skill Qualification (DMOSQ) courses over a 12-year period ending in fiscal year 2010. The Army Training and Doctrine Command (TRADOC) is redesigning more than 30 Army MOS producing courses per year, some of which became available during fiscal year 2000.

In addition, the National Guard Professional Education Center (PEC) is redesigning 70 ARNG functional courses. Eight courses have already been redesigned and three have been conducted using DL methods. The ARNG also provides courseware development to improve individual sustainment, collective tasks, and emerging missions training. All courseware produced for ARNG complies with the modularity and re-usability guidance of the Office of the Secretary of Defense's Advanced Distributed Learning initiative (ADL).

The ARNG DL initiative continues to expand its scope in compliance with congressional intent. The ARNG has participated in the development and conduct of several DL courses in the following soldier occupational specialties and career courses: 13F—Fire Support Specialist, 13M—Multiple Launch Rocket System (MLRS) Crewmember, 13P—MLRS Fire Direction Specialist, 19K Advanced Noncommissioned Officer Course, 67T—UH–60 Helicopter Repairer course, 93C—Air Traffic Control Operator, 97L—Linguist/Interpreter, the Armor Captain's Career Course, and the First Sergeant Course.

The ARNG functional courses such as Unit Clerk, Personnel Sergeant, Training and Mobilization Management, and Army Training and Resources Requirements System (ATRRS) courses have been conducted using ARNG DL assets. Information

Operations training is also offered via DL. Approximately 300 office automation courses are available to ARNG soldiers and civilians via web-based training.

Hundreds of non-military courses spanning a multitude of vocational, leisure, business, certification and general interest areas are prepared for ready access by users of the DL system.

Staff and faculty must be trained to manage DL classrooms and to deliver training to remote locations by making effective use of new technology. The PEC is conducting a DL instructor training course. This course provides instruction on the use of DL classroom equipment, along with DL and adult learning theory. A course covering property and financial management, business plans, customer service and equipment operation is also available.

Traditional student and instructor support services are required in the DL environment. The Army Training and Resources Requirements System (ATTRS) has been adapted to manage DL course enrollment and reporting for military students. The DTTP Integrated Information System (IIS) can manage any non-National Guard students using ARNG facilities under a shared use agreement. This system also accomplishes scheduling, metering, billing, and course repository functions. Employment of new training technologies and methodologies will necessitate education to raise awareness and involvement for commanders, trainers and soldiers. To facilitate this culture change, NGB is planning a series of DL orientation videos to illustrate the potential of DL and to provide an overview of roles and responsibilities.

Since DL classroom facilities are designed for multi-use operations, the overall management and administration of the venues is particularly important. Guidance must be provided to the STARCs to assist them in fostering teaming relationships with other public, private, state and federal agencies aimed at capitalizing on resources, information and strategic partnerships. The shared use initiative promises significant collaboration between government and non-governmental organizations, and must have financial, contractual, marketing as well as consultative support resources.

Appropriate business practices associated with classroom use by non-military organizations and individuals must become standard across the DL system. All of these imperatives are being addressed by the ARNG.

DL is a strategic capability that will bring improvements in many functions such as training, operations, recruiting and retention, and the ability to add quality to our communities.

Automated Requirements Model—Guard (ARM–G)

ARM–G is a training requirements projection model designed to provide input to ATRRS. It supports the process that projects individual training requirements for ARNG soldiers for: professional development, in-service DMOS training, initial entry training and additional skill identifier training. The model also determines the geographic locations where the training should be conducted.

Major improvements to the Army Funding Allocation Model (AFAM)/ARM–G Modules in fiscal year 2000 included:

—Initial fielding of both the Regional Training Institute Readiness Module and the Training Analysis on Demand (TAOD).

—Adding the ability for AFAM to read data on reservations directly from the Army Training and Resources Requirements System, mark the individual as selected for training, and provide cost estimates for the training required.

—Identifying individuals attending training at PEC who are attending training as a technician.

Planned upgrades to the AFAM/ARM–G Models in fiscal year 2002 include:

—Addition of the ability to make reservations directly in ATRRS based on selecting an individual for training in AFAM.

—Addition of the ability for ARNG units to use TAOD to justify and provide inputs directly to National Guard Bureau in support of the Quarterly Army Program Review (QAPR) process.

—Modification of ARM–G to provide training and individual training funding projections through the entire Program Objective Memorandum (POM) process as a basis for justification of funds.

—Modification of the Regional Training Institute (RTI) Support Model to account for all funding requirements for an RTI. The model currently accounts only for the supplies and services piece.

The Army School System (TASS) Transition

During fiscal year 2000, the U.S. Army Training and Doctrine Command (TRADOC) progressed to approximately 60 percent TASS implementation. During fiscal year 2000, there were 3,459 ARNG classes conducted with 3,348 scheduled for

fiscal year 2001. Important initiatives such as the Cross Component Resourcing Program are in the execution phase and appear on-track. This program allows financial reimbursement between the Reserve Components for training support furnished. Equipment constraints supporting various programs of instruction continue to impact TASS battalion's ability to teach specific courses. New equipment fielding, as part of The Army Transformation, compounds the issue.

During fiscal year 2001, a TASS strategic plan, also tied to Army Transformation and TRADOC Transition, will be initiated. Examples of subject matters to move TASS transition forward include: promotion of mutual support between TASS battalions and proponent schools; a strategy to decrease cycle-time and increase availability of courses for soldier MOSQ; vigorous use of DL methodologies for course delivery, and the use of multi-component organizations to meet the diverse needs of each TASS region.

The targeted TASS strategic end state is that the component of students and instructors will be immaterial, the quality of equipment and facilities are equal, and programs of instruction deliver the same tasks to the same standard such that the sources of training are indistinguishable. To this end the Commander, TRADOC, Director, ARNG and Chief, USAR have signed correspondence encouraging cross component cooperation.

Information Operations Training Program

In fiscal year 2000, the ARNG developed offensive and defensive Information Operations (IO) capabilities to support ARNG and Active Component (AC) commanders through an approved Department of the Army (DA) force structure. The ARNG IO capability includes IO teams, IO tactical staff sections and IO centers. Currently, the ARNG has three different types of IO teams: Field Support Teams, Vulnerability Assessment Teams and Computer Emergency Response Teams (CERTs). Seven ARNG Field Support Teams (FSTs) provide tailored offensive and defensive IO support through a supported command's staff structure and the military decision making process to build an information advantage for Army commanders over potential adversaries.

Five ARNG Vulnerability Assessment Teams (VATs) provide direct IO support to Army units and organizations in garrison, during deployments or during exercises by conducting operational and technical assessments to identify information processing and information system vulnerabilities that potential adversaries could use to their advantage.

ARNG CERTs, in conjunction with the Army Computer Emergency Response Team at Fort Belvoir, Va., provide in-depth defensive IO support for computer networks and information systems. ARNG CERTs also can identify threats, assess and protect the vulnerability of deployed computer networks against potential attacks and respond to computer incidents that attempt to limit operations by compromising, corrupting, or accessing information. ARNG tactical IO sections are assigned to each of the eight ARNG divisions and 15 ARNG brigades. ARNG tactical IO sections can operate as part of a corps, division or brigade staff to plan, synchronize and coordinate offensive and defensive IO to support the commander's overall intent.

The ARNG also established three IO centers: the ARNG IO Training Development Center (IOTDC), the IO Command and Control Center and the IO Support Center. In fiscal year 2000, the Combined Arms Center at Fort Leavenworth, Kan. developed IO courses to develop the first Army-wide IO training course for all Army officers. The ARNG IOTDC developed the first and only DA course certified as satisfying the requirements for Information Assurance Level Three training. Additionally, the ARNG trained units to plan and conduct non-lethal, pro-active Information Operations for peace operations in Bosnia.

By fiscal year 2002, the ARNG IO capabilities and assets will significantly contribute to the overall Army effort in several key areas. The ARNG will significantly increase the number of IO trained soldiers available to support the creation and protection of an information advantage that our battlefield leaders will need to fight and win. The ARNG IO capabilities will also contribute significantly to the civil support mission in the United States. ARNG defensive IO teams (VATs and CERTs) will identify information system vulnerabilities in each state, territory and ARNG unit that a potential adversary could exploit. The ARNG defensive IO capabilities will enhance the overall effort to avoid an "electronic Pearl Harbor" and preserve the information advantage held by the United States.

Funding of New and Displaced Equipment Training in Fiscal Year 2000 and Fiscal Year 2002

A total of $12.1 million was funded and distributed to the ARNG in support of new and displaced equipment fieldings. These funds supported a total of 27 system fieldings:

SINCGARS ASIP (Digital Tactical Radio)
AFATDS (Advanced Field Artillery Tactical Data System)
FAADC²I (Forward Area Air Defense Command, Control and Intelligence)
AN/PSG–9 FED (Forward Entry Device)
CSWP (Crush Screen Wash Plant)
M53500 5–60KW (Medium Smoke Generator)
M56 (Motorized Smoke Generator)
SENTINEL RADAR–AN/TPQ–64 (Air Defense Radar)
UH–60L (Black Hawk Helicopter)
M109A6 Paladin (155 Self-Propelled Artillery System)
M2 BFV (Bradley Fighting Vehicle)
M60 AVLB (Armored Vehicle Launched Bridge)
M270 MLRS (Multiple Launch Rocket System)
MK19 (Grenade Machine Gun)
M240B (Medium Machine Gun)
FMTV (Family of Medium Tactical Vehicles)
AN/PVS–7D (Night Vision Goggles)
M16A4 (Personal Weapon)
M4 Carbine (Personal Weapon)
M1A1 (Abrams Tank)
PLS with Engineer Mission Modules (Palletized Load System)
HETS (Heavy Equipment Transporter System)
M915A3 (Tractor Trailer)
ATLAS (All Terrain Lifting Articulated System)
20-Ton Dump Truck
CSSCS (Combat Service Support Control System)
AN/TSQ–179 (Jstars Target Acquisition Subsystem)
HYEX Type II (Hydraulic Excavator)

In fiscal year 2002, validated new equipment training and displaced equipment training funding requirements totaled $10.8 million while critical requirements totaled $8.4 million. However, only $2 million of critical requirements are funded, leaving a $6.3 million Unfunded Requirement (UFR).

The following systems and states are affected by the funding shortfall:

System	States Affected
Advanced Field Artillery Tactical Data System (AFTADS)	SD, TN, WI, CO, GA, KS, KY, MI
Multiple Launch Rocket System (MLRS)	AL, TX, CO
SINCGARS Tactical Radio	VA, MD, MA, PA, WV, CA, NY, IA, MN, WI, CO, IL, VT, NJ, CT, DE, RI, TX
Sentinel Radar	FL, OH
Forward Area Air Defense Command and Control System (FAADC²I).	NM, FL
Firefinder Radar	FL, OH

The UFR will affect the preparation for the First Digitized Corps (FDC) exercise and the ability for the ARNG to demonstrate digitization capability and capacity. Without funds for required new equipment training and displaced equipment training, many states will not be able to receive critical equipment, having a significant impact on their readiness.

Training Support XXI/Tiger XXI Initiative

Congress mandated that at least 5,000 soldiers from the Active Component (AC) provide training support to the ARNG and USAR to reduce post-mobilization training time. Congress further mandated that the ARNG maximize use of Training Aids, Devices, Simulations, and Simulators (TADSS). While Training Support (TS) XXI focuses on lane and gunnery evaluations in the live environment, Training Investment in Guard Readiness (TIGER) XXI provides strategies, methodologies and infrastructure to enable units to train in the virtual and constructive environments.

This infrastructure includes Commanders' Operations and Training Assistants (COTA) who can recommend strategies and methodologies for "best use" of TADSS

and also technical support personnel who actually operate the various devices. These personnel work with unit commanders to coordinate TS XXI Observer-Controller/Trainer (OC/T) support for training in virtual maneuver and constructive battle staff training.

TIGER XXI methodology follows a phased learning model tailored for the unique environment of ARNG units. There are four training pillars: individual, battle staff, small unit collective and logistics training. Each of these pillars has a systemic, progressive, and measurable methodology. By integrating live, virtual and constructive training devices and events with quality OC/T support, individuals and units are able to learn those tasks and processes needed for successful execution.

QUALITY INSTALLATIONS

Installations Vision

The installations vision for the Army National Guard (ARNG) is to capitalize on the geographical dispersion of our community-based installations and training sites to facilitate communications, operations, training and equipment sustainment. The ARNG is committed to providing state-of-the-art installations and training sites from which to deploy the force.

To implement this vision, the ARNG has a comprehensive program involving education, real property development planning, computerized maintenance management, energy management, 21st century technologies, and sound leadership decisions.

Planning Resource for Infrastructure Development and Evaluation (PRIDE) Software Implementation

Planning Resource for Infrastructure Development and Evaluation (PRIDE) is the National Guard Bureau's (NGB) guide for moving its facility information systems forward from the 20th to the 21st century. Volunteers from the ARNG Installations Division and state action officers developed a system that provides a more robust information base for decision support to the ARNG infrastructure community. Phase 1 of the PRIDE implementation focused on project management and inventory of the ARNG facilities. All states and entities were on line by the end of fiscal year 2000.

In fiscal year 2002, training courses will be developed and conducted for the maintenance management and computer-aided design (CAD) integrator modules of the software. Training in these modules will complete implementation of the full functionality of the PRIDE software.

Facilities Overview

The ARNG operates 3,174 readiness centers in 2,679 communities in 50 states, three territories and the District of Columbia. In addition, the ARNG federally supports the operation and maintenance of more than 19,000 training, aviation and logistical facilities located throughout the nation. The sustainment of modern and well-maintained facilities is a key component of an efficient ARNG organization.

Acquisition of land in Minnesota and Louisiana during fiscal year 2000 has helped resolve shortfalls in training lands available to ARNG soldiers. These acquisitions have reduced the amount of time soldiers spend on the road traveling to alternate training sites, thus giving leaders more time to train their soldiers in the field. This, coupled with new training areas which can accommodate larger scale unit training, will result in enhanced readiness in units.

A portion of the Twin Cities Army Ammunition Plant was reassigned to the Minnesota Army National Guard (MNARNG) during fiscal year 2000. Prior to this 1,245 acre acquisition, the MNARNG had a significant training area shortfall for Mechanized Infantry/Rifle units to conduct adequate maneuver training in the Twin Cities area. Existing local training sites limited training to squad and platoon-level activities. The additional land significantly expands training opportunities for leaders to conduct multiple-unit maneuvers during weekend drills and annual training.

Louisiana Army National Guard (LAARNG) soldiers will also benefit from expanded training areas. Part of the Louisiana Army Ammunition Plant was reassigned to the ARNG in fiscal year 2000. The LAARNG had a significant training area shortfall for the 1083rd Transportation Company prior to this 12,896-acre acquisition. Consisting of 96 Heavy Equipment Transporter Systems (HETS), 40 support vehicles and 300 soldiers, the unit was restricted on the types of training it could accomplish with the limited amount of land available. The additional acreage has helped to resolve the shortfall.

Facility Planning Fiscal Year 2000/02

As an Army partner, one of the ARNG's strategies is to follow a rigorous and disciplined process using Army standards to establish priorities for military construc-

tion requirements. One method of implementing that strategy is the Real Property Development Plan (RPDP). The initiative is a five-year program that began in fiscal year 1997 and ends in fiscal year 2001. The State RPDP is a new concept in master planning designed to provide a comprehensive tool the states can use to focus and prioritize their installation resources. This plan will provide a method for assessing existing conditions of real property assets statewide and will help establish the strategic development plan for long-term management of facilities. RPDP was adopted by an additional 12 states in fiscal year 2000, bringing the total to 42. By the end of 2001, all 50 states, three territories and the District of Columbia will have begun their Real Property Development Plans. This planning tool is providing the states with a decision-making guide for long-range acquisition, utilization and development of real property.

The ARNG refined its strategy in fiscal year 2000 by integrating our specific facility needs with the Standard Army Systems. This will give the Department of the Army (DA) a more accurate view of what type and how many facilities the ARNG needs to successfully complete its missions. The ARNG's plan is to complete incorporating our facility needs into the Standard Army Systems by the end of 2002.

Military Construction (MILCON) during Fiscal Year 2000/Fiscal Year 2002

The ARNG requested $16 million for military construction (MILCON) during fiscal year 2000. This request proposed spending $11.1 million for five projects, $0.8 million for unspecified minor construction and $4.1 million for planning and design. The ARNG received an appropriation of $237.4 million for an additional 17 projects at $194.3 million, a total of $16.4 million in planning and design and $15.6 million in unspecified minor construction. Congress also called for a general rescission on military construction funds for all services. The ARNG portion of the cut was $1.2 million from the fiscal year 2000 appropriation.

The budget request for fiscal year 2002 outlines spending $75.4 million for military construction, Army National Guard (MCNG). This includes $61.8 million for nine major construction projects, $3.7 million for unspecified minor construction and $9.8 million for planning and design. Of this amount, $13 million will be set aside for sustaining and stationing requirements in Phase I of the Army Division Redesign Study (ADRS).

Although the ARNG received a proportional share of the limited MILCON dollars, MCNG's fiscal year 2002 unfinanced requirements are $542 million. This equates to 43 additional projects. Thirty-four of these are critical to the Army's Facility Strategy: 14 readiness centers, 10 military education facilities and 10 surface maintenance facilities. Only when this strategy is funded will the Army National Guard escape from its current unsatisfactory rating in infrastructure. This rating means that ARNG facilities are significantly impairing the mission performance of ARNG units, because its soldiers and civilians are working and training in substandard facilities. At the current rate of funding, it would take more than 300 years to revitalize existing facilities.

Installations Status Report—Infrastructure (ISR I) Program

The Army has developed a management system to track the conditions and costs associated with improvements to the infrastructure. This information is being used to greatly enhance The Army's ability to explain current funding levels, project operations and maintenance costs and predict future construction projects needed. The system allows The Army to get a better handle on cost projections, and enables Congress to justify increasing expenditures.

The quantity and quality of ARNG facilities are determined by input from each state and entered into the Army model. In fiscal year 2000, the Army's Installation Status Report results measured a facility deficit of $20 billion for the ARNG. In addition, a $6.7 billion repair backlog resulting from years of underfunding was also identified.

In fiscal year 2000, the ARNG in the states operated about 150 million square feet, with a plant replacement value of $18.9 billion. The ARNG requires modern facilities that are estimated to cost $19 billion to construct, according to the Army's Installation Status Report. Facilities sustainment for fiscal year 2000 was funded at about 78 percent, which means facilities continue to deteriorate and the repair backlog continues to increase.

Energy Conservation Investment Program (ECIP)

The Energy Conservation Investment Program (ECIP) provides MILCON funding for maintenance and renewable energy projects totaling more than $500,000. These will enhance energy performance while also repairing facilities. The ARNG received its first ECIP project award for facility energy improvements in September 2000.

The $704,000 award will be used for the Arkansas ARNG headquarters in Little Rock, Ark.

The Department of the Army (DA) has approved two more ECIP projects for the ARNG, scheduled for fiscal year 2002. A facility energy improvements construction project totaling $790,000 is scheduled for Gowen Field, Idaho and a construction backup project is scheduled for Camp William, Utah. The Camp William project includes installation of a 650 kilowatt wind turbine and other energy improvements at a cost of $752,000.

Environmental Program

The ARNG Environmental Program emphasizes responsible stewardship of the land and facilities managed by the ARNG and compliance with environmental laws and regulations. This is accomplished by promoting The Army's environmental goals through ARNG environmental compliance, conservation and restoration efforts nationwide.

The ARNG environmental compliance program far exceeded expectations in fiscal year 2000 by not only reducing open enforcement actions, but also significantly decreasing our new enforcement actions over previous years. Through the assistance of an ARNG cooperative and responsive process action team, we reduced open enforcement actions to three. Through increased visibility by the ARNG leadership and state environmental program managers, the ARNG reduced new enforcement actions from 33 in 1999 to 11 in 2000, which represents a 200 percent improvement. These actions surpassed the Assistant Chief of Staff for Installations Management's (ACSIM's) goals for reduction of new and open enforcement actions.

The ARNG Environmental Division identified an excessive number of storm water permits, which may have been issued erroneously, through increased scrutiny and analysis of the Environmental Quality Report. In many cases, these permits were issued to armories, which should have qualified for a national defense exemption. The Environmental Programs Division is providing guidance to ensure that environmental managers in the states do not obtain permits when they are not required by law to do so, and to terminate those permits deemed unnecessary. The reduction in the number of unnecessary permits will allow the environmental managers in the states to decrease the potential for violations, time and effort for permit management and reporting, as well as reduce the extra duties, training and responsibilities of facility and operations personnel that are required to support these permits.

The ARNG developed an extensive and proactive Environmental Compliance Assessment System (ECAS) that identifies compliance enforcement action challenges prior to regulator enforcement and assists in lowering the number of new enforcement actions. The ECAS also identifies gaps in policy and guidance at the MACOM level. Through this process, we have cooperatively developed more responsible environmental policy to support the sustainment of the ARNG mission capabilities.

An example of this cooperative development is the ARNG policy for use and storage of mobile fuel tankers. This policy is a combined effort of the logistical, installations and environmental policy managers to diminish the threat of fuel spills at ARNG facilities. The policy will decrease the potential for spills, be considerably more economical, as well as provide needed tactical fuel to accomplish unit training.

The ARNG is working with The Army to develop guidance for environmental and explosives safety management on active and inactive ranges. This is a direct result of an Environmental Protection Agency (EPA) administrative order at the Massachusetts Military Reservation (MMR) for violation of the Safe Drinking Water Act. Cooperative efforts will ensure that ARNG soldiers receive realistic training while also complying with environmental regulations.

The ARNG completed three Programmatic Environmental Assessments for the UH–60 Blackhawk, Paladin, and Multiple Launch Rocket System (MLRS). The programmatic means of addressing the National Environmental Policy Act (NEPA) requirements is a more efficient way to support state requirements. We are continuing to use programmatic NEPA documents to field major systems such as 50-ton rock crushers. The Army is developing a Programmatic Environmental Impact Statement for The Army Transformation, which the ARNG will supplement in support of the ARNG Transformation.

The development and implementation of our 91 training area Integrated Natural Resources Management Plans (INRMP) and our state Integrated Cultural Resource Management Plans (ICRMP) will enhance ARNG stewardship of our training lands while enabling us to fully support the training mission. The result of this monumental effort is an increase in the number of endangered species and their habitat identified on our training lands. However, as we discover these environmentally sensitive areas we are also able to address how to manage the areas with a minimum of impact on the overall training mission.

Native American issues are a major feature of ARNG's ICRMPs. Each installation works closely with federally recognized Indian tribes on a government to government basis. In addition, the ARNG is implementing initiatives with intertribal organizations such as the National Congress of American Indians and the United South and Eastern Tribes. As an aid to historic preservation and good stewardship, each of the 51 ICRMPs provides standard procedures and other guidance for installation staff, who manage tens of thousands of archaeological sites and historic structures on our training lands. The ARNG provides cultural resources training on a regional basis and assists individual installations to provide local awareness training and public outreach. ARNG Cultural Resources teams are also developing maintenance and treatment plans for the ARNG's historical buildings, which will enhance both our stewardship and readiness capabilities.

To assist in managing the environmental information that is gathered through these various initiatives, we have fielded and implemented Geographic Information System (GIS) capabilities to all 50 states, three territories and the District of Columbia. ARNG program managers will also be able to access GIS technology at the headquarters level to advise and assist the training sites.

Restoration

The National Guard Bureau (NGB) is tasked to execute the Army's Installation Restoration Program for federally owned ARNG facilities. In addition, state-owned facilities are also encouraged to evaluate their facilities for past practice contamination. The ARNG restoration program is responsible for the inventory and data collection for all closed and transferred military ranges within the ARNG.

During fiscal year 2000, the ARNG completed 20 site-specific preliminary assessments for environmental concerns and inspected many other sites. Environmental restoration projects conducted included the remedial action at the Seabee compound and the bio-remediation of JP4 and solvent contaminated soils at Los Alamitos, Calif. and the flagging of unexploded ordnance and bio-remediation of trinitortoluene (TNT) contaminated soils and groundwater at Camp Navajo, Ariz. At Camp Crowder, Mo., we completed a drainage improvement project to reduce infiltration of contamination from the engine test area pit. The engine test area was listed on the National Priorities List as part of the Pools Prairie Superfund Site in fiscal year 2000.

The ARNG is continuing to deal with potential funding issues involving state owned or privately owned ranges. Many closed or transferred ARNG ranges are state owned or privately owned but are supported with federal funding due to their contribution to The Army's mission. This situation may prevent Environmental Restoration, Army (ER,A) funding based on The Army's final policy determination. If precluded from receipt of ER,A funding, cleanup requirements must be funded from ARNG operations and maintenance funds. The Army Corps of Engineers policy also precludes use of formerly used defense site funding for transferred ranges on property that was not under Department of Defense (DOD) control during the range usage. For example, funds were denied in a North Helena Valley, Mont. project because the munitions fired were federally procured and associated training was in support of the federal mission. The denial resulted because the training occurred on privately owned land.

For fiscal year 2002, the ARNG will continue to work toward the closure of additional restoration sites, continued evaluation of state owned property, and the closure of all installation restoration program sites at Camp Navajo with the exception of the open burn/open detonation area. In fiscal year 2002, implementation of a cost sharing plan for the Massachusetts Military Reservation Installation Restoration Program will begin. This cost sharing plan will result in a significant cost reduction for the Army ER,A budget, as well as streamline management of this ARNG program.

The Environmental Division continues to provide leadership, policy and resources to the states, territories and the District of Columbia to allow ARNG units to train effectively to meet their national defense mission while ensuring compliance with environmental regulations and stewardship of our natural resources.

QUALITY OF LIFE

The military today is being utilized in a much different way than it was just 10 years ago. Our military is a million members smaller than it was in 1990. Without the reserve components, our military could not accomplish its missions. As a result of the dramatic changes in our utilization, we have to develop our programs that address the changing needs of our members, their families, and their employers. Those programs are essential to help soldiers maintain a balance among three facets

in their lives—family commitments, work and military requirements—to ensure readiness and maintain unit strength.

Employer Support to the Guard and Reserve (ESGR)

The mission of the Employer Support of the Guard and Reserve (ESGR) is to obtain employer and community support to ensure the availability and readiness of Reserve forces. This support is especially essential today since the Operational Tempo (OPTEMPO) of The Army is now 20 times higher than it was during the Cold War. For example, on any given day, 35,000 National Guard and Reserve troops are serving on active duty in 77 countries throughout the world. Today more than half—54 percent—of today's military forces are in the National Guard or Reserve forces.

There are several other reasons that the mission of ESGR is so important to our National Guard and Reserve forces. Today, there are fewer and fewer people in society who have any kind of military background. For example, an astounding 94 percent of people between the ages of 18–65 have no military experience. Little wonder that as a result, there is a lack of employer appreciation for the skills and attributes of employees in the Guard or Reserve.

To counteract this enormous knowledge gap, ESGR has developed a number of programs to educate employers about the duties their citizen soldiers must live up to and the hardships they must endure as members of the military. Programs like "Boss Lift" are working not only to educate but also to inspire.

One Chief Executive Officer (CEO) traveled to Bosnia to visit an employee who was serving on a deployment. "At the time, I knew what our corporate needs were, but I didn't have the knowledge base, or the understanding of what the military mission was," said the CEO. "I got that in Bosnia." He put his thoughts on paper when he wrote a letter after the trip to Col. Tony Harriman, the commander of the 3rd Armored Cavalry Regiment. "What you and all the troops are providing to the world with your presence in Bosnia will have an effect on the world for generations to come," he wrote.

ESGR has also developed programs to reward and recognize employers who take the time to gain understanding about their citizen soldiers and who support their employees in fulfilling their military duties.

Standardization of Deployment Rotations

In March of 2000, The Army committed to standardizing the length of time soldiers spend on certain deployments, regardless if they are members of the active or reserve components. The action applies to tours in support of Operations Other Than War (OOTW) and Small Scale Contingencies (SSC).

Under the new, unifying measure, units will be employed for a maximum of 179 days performing their assigned mission in the area of operations. Normal pre-employment training, either in or outside of the United States, does not count toward that 179-day figure.

The action applies to all units employed in support of an OOTW or SSC, whether they perform their duty in Germany, Hungary or Kosovo. Also, in cases such as Southwest Asia, where the tours have been averaging 120 days, this does not mean those tours will lengthen in order to extend them to 179 days. Reserve deployments in the Balkans previously averaged 210 to 230 days, including transition time, while active-duty soldiers spent, on average, 179–210 days.

Pay and Benefits

Nearly 1.4 million members of the National Guard and Reserve will benefit significantly from the $309.9 billion Fiscal Year 2001 National Defense Authorization Act (NDAA). Starting Jan. 1, Guard and Reserve members will see a 3.7 percent increase in drill and annual training pay, and numerous other incentives and benefits that the Department of Defense believes will keep them in uniform longer and attract more young people to join the force.

National Guard and Reserve members can now receive credit for up to 90 points each year for inactive duty training, completion of correspondence courses and membership in the Guard or Reserve. This is a 15-point-per-year increase over the previous limit. It will also allow Guard and Reserve members who perform additional drills and complete additional study through correspondence courses to receive credit for their extra effort, which will be used to calculate their Reserve retired pay. Also included are improvements in special pays and benefits.

National Guard Family Readiness Program

The recent name change from Family Support to Family Readiness Program more accurately reflects the importance of organized family groups to the readiness of individual soldiers and their units. We enlist soldiers but "reenlist families". Their un-

derstanding of the Guard is critical to unit retention. Family Readiness groups communicate the obligations of service members and help families determine what they need to be prepared for training and deployments.

The National Guard Family Readiness Program is an extensive infrastructure and national network that links 2,679 communities nationwide. The full-time State Family Readiness Program coordinators work with military points of contact and volunteers at every organizational level. They promote family member volunteerism, family readiness groups and facilitate family readiness training throughout the National Guard.

During periods of mobilization and as situations dictate, approximately 3,000 ARNG strength maintenance personnel assist Family Programs in Family Assistance Center operations throughout the country. They and members of the Family Readiness Program network provide basic family readiness training and counseling in preparation for the deployment of military family members. They provide information for referrals and follow-up services, emergency assistance, crisis intervention, reunion planning and activities and youth outreach programs for children of National Guard members.

Video teleconferencing (VTC) for soldiers and their families during the 49th Armored Division's rotation in Bosnia is just one example of how families can get together and use technology to reach across six time zones and 5,000 miles to their service members. These teleconferences, in addition to email capabilities and telephone access, served to assure participants of their soldier's well-being but also helped to educate family members. "I think for the first time I realized where he was and what he was doing, and the sacrifices that our soldiers make for this country," said a mother-in-law after sitting in on a VTC from Bosnia. "I appreciate what he's doing and what everyone is doing so much."

Family Readiness Groups work for all services. A key Army National Guard quality of life goal is to provide assistance to all military families, regardless of branch or component, who find themselves beyond the support capability of active duty military facilities or their home units.

In 2001, the ARNG will come a full partner in the Army Morale, Welfare and Recreation program. This will provide ARNG soldiers with added recreational and social opportunities previously available only at active installations.

Medical Programs

TRICARE Prime Remote was implemented Oct. 1, 1999. It offers the TRICARE Prime benefit through managed care support contractors for active duty service members with duty assignments in remote locations. In four of the 13 TRICARE regions, TRICARE Prime Remote provides the remote benefit to active duty family members as well. The fiscal year 2001 budget request includes provisions for expanding the remote benefit to active duty families nationwide. This is especially helpful for families of mobilized Guard members who do not have easy access to military medical facilities.

Dental benefits expanded to include Reserve and National Guard families as beneficiaries for the new TRICARE Dental Program (TDP) beginning Feb. 1, 2001 under Department of Defense policy guidelines. This will significantly expand the number of Reserve forces personnel eligible for TDP. One important new feature will allow Reserve and National Guard members called to active duty in support of contingency operations to sign their family members up for the TDP by excluding them from the mandatory enrollment period. The new policy guidelines will significantly improve the readiness of Reserve force families and be a tremendous benefit to National Guard and Reserve personnel.

Other improvements to TRICARE benefits, including changes to retiree medical and dental programs, pharmacy benefits, and outreach efforts such as internet web site for information and phone in assistance for billing questions all add up to better service for all military members and their families.

Senator STEVENS. Senator Weaver.

STATEMENT OF MAJOR GENERAL PAUL A. WEAVER, JR., DIRECTOR, AIR NATIONAL GUARD, DEPARTMENT OF THE AIR FORCE

General WEAVER. Mr. Chairman, I am so honored to be with you here this morning, as I get ready to come to a close of a 35-year military career. I am also honored to have two of my children here this morning to prove to them that I actually do go to work and to be here. This is their civics lesson for the day, and they got a day off from school.

Senator STEVENS. Introduce us to them.

General WEAVER. Behind me are our daughters, Kathy Lee's and our daughters, MacKenzie and Jenna.

Senator STEVENS. Thank you very much, General.

General WEAVER. They will not forgive me for that.

Senator STEVENS. Oh yes, they will.

General WEAVER. Thank you, Mr. Chairman, sir. Mr. Chairman and distinguished Senators, on behalf of over 106,000 proud women and men of the Air National Guard, I would like to thank you for the opportunity, the great opportunity to appear before this committee. Over the last decade, with the generous support of this body, the Air National Guard has significantly changed in capability and focus as our nation's most relevant, most ready, and accessible Reserve component in the Department of Defense today.

OPERATIONS TEMPO

The Air National Guard operations tempo is a full 1,000 percent greater than 1990 figures. Our support to all Air Force contingency operations over the last decade has increased from 24 to 34 percent of the total force aircraft employed.

Today the number of active duty days per Air National Guard member has increased greatly, all based on the exceptional volunteerism of our dedicated citizen airmen, and without reliance on a presidential Reserve call-up.

EXPEDITIONARY AEROSPACE FORCE

In cycle 1, to give you an example of the Expeditionary Aerospace Force deployments, the Air National Guard contributed 25,000 of our people towards the total force requirement. Over the last 15 months, the Air National Guard contributed 42 percent of the C–130 intratheater lift, 22 percent of our KC–135 steady state air refueling the Expeditionary Aerospace Force (EAF) requirements, and 35 of the Air National Guard's 37 combat-coded units were aligned during cycle 1 rotations. Never in the history of our Air National Guard have we done that.

The Air National Guard contributions continue. The total force will even be greater in EAF cycle 2, when every combat-coded Air National Guard fighter unit is aligned to participate, including eight Air Guard precision-guided munitions, or PGM-equipped units. In other words, Mr. Chairman, every 30 months, half of the Air National Guard is deployed doing real-world work in conjunction with our total force brethren.

MODERNIZATION

With the fielding of the Air National Guard's number 1 combat Air Force modernization priority, precision-guided munitions targeting pods, the Air National Guard was able to provide 100 percent of the strike and air superiority fighters in the EAF–9 alone. We are more relevant to the fight than ever before in our history, and I thank this body for making that happen.

F–16

We still need about 96 more pods to fill our requirements for our Air National Guard Block 25's, 30's, and 32 F–16's, to give them the same capability as our Air Force's Block 40 and 42 F–16's, but our fighters certainly do not get the job done and get home safely without the efforts of our stalwart tanker community. Increasingly, our Air National Guard modernization focus has shifted to necessary improvements in our KC–135 fleet. We strongly support the acceleration of the purchase of the "D" model conversion kits and the production of a follow-on tanker.

KC–135

We need to seriously look at expediting the KC–X, or the KC, commercial off-the-shelf (COTS) derivative. We are adding to this tanker community with the Sioux City, Iowa, conversion from F–16's to KC–135's, and have begun to accelerate our planning efforts to assure the necessary planning projects are funded in a timely manner.

C–17

In addition, we are striving to move the C–17 conversion forward at Jackson, Mississippi, replacing the aging and retiring C–141's. We are laying the groundwork for the necessary infrastructure and support requirements, and continue to work for the bed-down in fiscal year 2004. We strongly support the addition of five C–17's to support the much-needed airlift requirements of our military forces.

RETENTION

This unprecedented contribution of our Air National Guard has occurred at a time when we have reduced our end-strength numbers to 1984 levels. That means we are asking our men and women to do more with less, and they are stepping up soundly to the task, but I am not surprised, nor should we be. Our Air National Guard retention has traditionally been the highest, the highest of any component of any service in the Department of Defense, and that is where it remains today, at well over 90 percent.

With your help, we have succeeded in our efforts to offer aviator continuation pay to eligible AGR pilots who agree to stay with us for 3 years or more. During the last year, we had a better than 90 percent take rate. We are now looking for appropriate incentive and bonuses for our Traditional Guard air crew and our enlisted air crew members who deserve full 30-day compensation for their extensive participation levels.

While incentives, pay structures, and bonuses help us to retain our valuable people, they are also significantly enhancing our recruiting ability. With your assistance, just last year alone, for advertising funds, we were able to implement our first-ever targeted media advertising campaign, to include TV, radio, and billboard ads and regional and national periodicals, and I am sure you have seen them on some of our more popular sports events. Complemented by the 65 additional recruiter authorizations that you

were able to give and fund for us, we were able to gain accessions in areas previously untapped.

FAMILY SUPPORT

Last year's focus on the Year of the Family, coupled with a sustained EAF rotations, brought to the forefront the need for full-time, dedicated family readiness and support. The Air Force currently allocates through their Family Support Center and operating budgets of about $125 per member. The Air Force Reserve, an honorable $58 per member. Last year, the Air National Guard took $750,000 out of hide to provide $7 per member allocation, using additional duty staff or unpaid, overburdened family member unit volunteers.

This is clearly not enough. The Air National Guard proposes supporting a full-time contract family readiness coordinator, much like the Air Force Reserve, and we truly need your assistance to jump-start this worthy effort. This past January, we began to focus on critical enablers and silent partners, the employers of our National Guard men and women.

The year 2001 has been designated the Year of the Employer Reconnecting with America. During the year, we are partnering with the National Committee for Employer Support of the Guard and Reserve to ensure our members and employers remain satisfied with our shared people and their dedicated commitment to continued military service.

PREPARED STATEMENT

Mr. Chairman, we are confident that the men and women of our great Air National Guard will meet the challenges set before us, and I thank you on behalf of all of them. We are strong and relevant today because of you. All of you and the proud men and women of the Air National Guard have made it so.

Thank you, sir.

[The statement follows:]

PREPARED STATEMENT OF MAJOR GENERAL PAUL A. WEAVER, JR.

Mr. Chairman and members of the committee. Thank you for the opportunity to appear before this committee—on behalf of the 108,000 proud men and women of the Air National Guard—to share the successes and challenges facing us over the next year and beyond. This new century has generated for many, including the Air National Guard, a time and opportunity to contemplate, plan and prepare for the future needs of our nation, state's, and community's defense requirements. Over 217 years ago, a citizen soldier and our first Commander in Chief—George Washington, led a group of politicians, warriors, strategists and citizens as they debated the design of our nation's necessary military establishment.

Today, our nation contemplates fundamental changes or shifts in the way we continue to "ensure domestic tranquillity" and "provide for the common defense" through a variety of national defense reviews.

There are many similarities in context between the national defense debates of Washington's time and—like it or not—the hand we've been dealt for our future security environment. That hand demands today, as it did then, a strong focus on expeditionary operations and increased reliance on the citizen-warrior to support a dramatically downsized active component and a world characterized by multiple small scale contingencies and transnational threats.

With only six percent of the nation's population under 60 who have military experience, Guard warriors are increasingly the military man or woman in uniform that most American's see. In fact, these proud Air Guard men and women are more and more the military presence seen abroad in support of CINC and service require-

ments. Daily, they are "shaping" strategic environments while demonstrating to others the vital role an individual citizen plays in our country's military defense.

It's people like Maj. Ray Lynott of the 144th Fighter Wing in Fresno, who flew the F–117 in the Persian Gulf nearly a decade ago while on active duty. Today, he conducts air-superiority patrols over southern Iraq as a member of the California Air National Guard. Over a cup of coffee or a backyard barbecue, Maj. Lynott and 108,000 other Air Guard warriors bring the value of Aerospace power to Hometown America. Like Ray, they tell America that, "Yes, it is in fact still a war zone" and "There's a lot of people—active-duty, Guard and Reserve—who are going up there on a daily basis risking their lives."

It's people like TSgt. David Yates of the Alabama Air National Guard who prepares and secures the munitions that our pilots' carry. It's people like Lt. Col. Steve Cray, a commercial and Air Guard pilot and CMSgt. Tim Brisson, the superintendent of aircraft maintenance of the Vermont Air National Guard, who not only deploy daily to dangerous places abroad in support of Expeditionary Aerospace Force (EAF) operations—but do it in critical Commander and maintenance chief leadership positions.

The Air National Guard is represented in all 54 states and territories by 88 Flying Wings; 579 Mission Support Units, with over 108,000 proud and skilled people—68 percent of whom are Traditional Guard volunteers—flying nearly 1,200 aircraft. We are significantly represented in nearly all Air Force mission areas contributing over 34 percent of the Air Force operational mission for as little as 7.2 percent of the budget.

Over the last decade, the Air National Guard has significantly changed—in both relevance and accessibility—but most significantly—in skill, professionalism and volunteer participation. Since 1990–1991 Desert Storm/Desert Shield, the Air National Guard contributions to sustained operations have increased 1,000 percent. We are no longer a "force in reserve", but are around the world partnering with our Active and Reserve components as the finest example of Total Force integration. ANG support to all USAF contingency operations over the last decade has increased from 24 to 34 percent of the Total Force aircraft employed. The number of Active Duty days per ANG member (above the 39 day obligation) has increased on the average from 5 to 16 (320 percent increase)—all based on the volunteerism of our dedicated citizen airmen.

In addition to our critical warfighting capabilities, America depends on the Air National Guard to do other vital missions like New York's 109th Airlift Wing's Antarctica support to the National Science Foundation. The 109th was recently selected as one of five winners of the Air Force Chief of Staff Team Excellence Award as well as the winner of top international honors at the Royal International Air Tattoo 2000.

These men and women are the diverse face of humanitarian responses to natural disasters both in our own borders and throughout foreign lands—bringing food, water, relief to people or places in need—"responding" to a call for help and intervention. Air Guard warriors like TSgt. Chris Whitcomb from North Carolina's 145th Airlift Wing fought the worst fires this year in over 50 years across 5.6 million acres of America—roughly the size of Massachusetts. This year our nation entered the highest state of fire alert—fire preparedness level five. TSgt. Whitcomb, a decorated Gulf War veteran says he gets "more of a feeling of accomplishment directly protecting U.S. citizens and their property from the wildfires."

But we're not just fighting the fires from dangerous tree top levels. Air National Guard and Forest Service fire fighters, RED HORSE and Prime BEEF engineers—from many units like Montana's 120th Fighter Wing—were on the ground hard at work—in life-threatening positions, while they were fed and supported by Nevada's 152nd Services Flight led by SMSgt. Tom Kurkowski—a 17 year veteran with Desert Storm experience. Over the last 6 months, our three C–130 Modular Airborne Fire Fighting Systems, or MAFFs, flew over 870 sorties for nearly 980 hours; made 841 airdrops to disperse over 2.3 million gallons of retardant across 19 states. We recently assisted the United States Forest Service with the acquisition process to purchase eight upgraded Airborne Fire Fighting Systems (AFFS) to enhance our effectiveness fighting this nation's forest fires.

Additionally, it is our inherent obligations to not only protect, but to also defend. Homeland security entails the protection and defense of our territory, population, institutions, and infrastructure from external attacks and intrusions. Rapidly advancing technological capabilities will give large and small nation states the ability to threaten or directly attack the United States with asymmetric means such as weapons of mass destruction, cyber weapons, and terrorism. Traditional means of defense often fail against these unconventional threats. Homeland security will re-

quire us to engage, support and cooperate with all levels of government and the private sector in new and innovative ways.

Our contributions don't stop at America's borders. During the next year alone, these same Air National Guard C–130 MAFFs units—like Wyoming's 153rd Airlift Wing—will supply ready aircraft and crews to fulfill Aerospace Expeditionary Force (AEF) combat delivery requirements in Operations Coronet Oak and Southern Watch. They define "full-spectrum" Aerospace Expeditionary Forces—responding to community, state and National Command Authority needs from fighting fires in America to supporting combat fighting operations around the world.

These Air National Guard men and women are the trained, skilled, and "prepared" citizen warriors, like Texas' 147 Fighter Wing's Maj. Mike "Bones" McCoy. Mike put his civilian job as an airline pilot on hold for two weeks to fly combat missions in a military campaign. Maj. McCoy shows the Hussein's and Milosevich's of the world what a galvanized nation of American citizens trained in the military art of war—can and will do to keep the world safe from aggressors and tyranny.

It's a lesson our leaders learned in Korea and the lesson we must insure our leaders know and understand today and remember in the future. This past year we commemorated the 50th Anniversary of the Korean War, where over 45,000 Air Guardsmen, 80 percent of the force were mobilized to fight a war they were ill equipped and resourced to fly. During this critical call by our nation, the Air National Guard reached the "Turning Point" to become increasingly effective and relevant forever. I know most of you know the history, but none of us should ever forget the lesson. We must be resourced. We must be modernized. We must be appropriately trained. We must be ready.

The Air National Guard is the most relevant, ready, and accessible reserve component in the Department of Defense today. Since the end of the Cold War, these forces have been increasingly deployed in support of the full range of operations. In cycle one of the AEF, the Air National Guard deployed 25,000 of its people—nearly 24 percent—almost 2,500 per AEF. We contributed almost 20 percent of the Total Force aviation package and 7 percent of the Expeditionary Combat Support or ECS requirements. The Air National Guard contributed 42 percent of the C–130 intratheatre lift and 22 percent of the KC–135 steady state air refueling AEF requirement. Of the Air Guard's 38 combat-coded fighter units, all 6 A–10 units, all 6 F–15 units, all 4 F–16 Block 40 units, the 1 F–16 Block 50 unit, and 17 of 21 General purpose F–16 units were aligned during Cycle 1 rotations. Air National Guard contributions to the Total Force will be even more robust in EAF Cycle 2, when every combat-coded ANG fighter unit is aligned to participate, including eight Air Guard Precision Guided Munitions or PGM equipped units. In Cycle 2, a total of 22 ANG F–15 and F–16 units will fly the air superiority mission.

Yes we are busy. Our people are volunteering above Desert Storm Peak levels with nearly 75 percent of our total workdays supporting CINC and Service requirements around the world. Our men and women are proud of their contributions. We've reduced our support to "good deal" exercises and now do "real world" missions that reduce the TEMPO requirements on our active component by at least 10–15 percent in almost every major mission area. Lt. Col. Steve Kopp can attest to that. He flies with Tulsa's 138th Fighter Wing, which has been deployed to fly missions over Iraq four times since 1996. The 138th is scheduled for another mission there this summer.

With the fielding of the ANG's number one CAF modernization priority—Precision Guided Munitions (PGM) capability—Targeting Pods—the ANG was able to provide 100 percent of the strike and air superiority fighters in AEF 9. We are more relevant to the fight than ever before in our history.

Additionally, our KC–135 fleet is tasked for the sole support of Airborne Warning and Control System (AWACS) aircraft at NATO Air Base Geilenkirchen. This entails an annual 850 flying hours and offloading over 6 million pounds of fuel during a 44-week year. Air National Guard units deploy two aircraft with sufficient flight, maintenance, and support personnel and equipment to sustain these operations.

This unprecedented contribution by your Air National Guard has occurred all at a time when we have reduced our endstrength numbers to 1984 levels. The bottom line: In 30 months—or two complete cycles of the AEF—nearly half the Air National Guard will know first hand what it means to be an expeditionary Aerospace Force. These same warriors will take this experience and knowledge back to their communities, families, employers and local and state political leaders. They will help the Air Force and the nation immeasurably in building understanding and support for a strong and ready Aerospace Force. I routinely visit these men and women in theater when they deploy. They consistently tell me what Airman Aaron Bachstein of Indiana's 181st Fighter Wing said on the eve of their AEF deployment to Turkey, "I knew the deployments were more involved, but that's part of the package. The

additional responsibility is part of the attraction. I can see where the Guard is picking up regular Air Force missions. It's exciting."

In the last year, the Air National Guard filled more than just "positions." We brought skills, experience and training to the theater that exponentially increased Air Force AEF warfighting capability. BrigGen. Scott "Zapper" Mayes of the Alabama Air National Guard was dodging anti-aircraft fire over Hanoi before most of the active-duty pilots in AEF 9 were born. The pilots under his command have an average of 2,000 hours flying in the F–16. With an Air National Guard base close to a commercial hub, "Scotty" has pilots waiting to "morph into warriors." As the Aerospace mission becomes more sophisticated, our remarkable Air National Guard experience and maturity provides more solutions to a growing total force problem.

We can train others well because we are trained well ourselves. It's new mission areas like Tyndall's Associate Unit where the Florida Air National Guard trains the Total Force pilot to fly the F–15. Using a mix of 18 Traditional Guard and 16 Full-time instructor pilots, we provide what Col. Charlie Campbell, the Squadron Commander, calls a "stabilized, highly proficient instructor cadre with great continuity and leadership." His perspective is backed by the former 325th Fighter Wing Commander, Brig. Gen. Buchanan, who stated, "Our partnership with the Guard is a good way to strike a balance that allows us to take advantage of the ANG's resident F–15 experience while trying to bridge our current pilot gap." We're expanding this sort of partnership and capability to many other training initiatives. This year, we filled nearly 700 "extra" technical training slots—over and above the Trained Personnel Requirements (TPR). We insured almost an entire additional ANG wing's worth of better trained warriors. This year, so far, we've increased this technical training number to well over 1,000, and increased Basic Military Training allocation by well over 900. This brings in serious new combat capability to the AEF requirements. We exceeded our TPR allocations in critical career fields like mechanics and fire protection. Once again, we provided the Total Force solution to an identified AEF shortfall.

The Air National Guard received 186 undergraduate pilot training slots in fiscal year 2001, up 13 from the previous year. The projected pilot shortage for most of the next decade makes it imperative to increase the pipeline flow to help sustain the Guard's combat readiness—especially as we assimilate more non-prior service individuals as a function of our overall recruiting effort.

We continue to pursue efforts to establish follow-on training bases for the KC–135E and C–130 pilots to offset training capacity shortfalls. Additional ANG F–16 pilot training units are being established at Kelly AFB, Texas, and Springfield, Ohio. The recently converted F–15 school at Kingsley Field, Oregon is still expanding student production. The Air Control Squadron in Phoenix, Arizona is converting to a schoolhouse unit to train Guard and Active Duty personnel.

From 14 control towers and 11 air traffic control radar facilities around the country, our air traffic control personnel controlled over 1 million aircraft, placing the Air National Guard as the third busiest of the nine Major Commands in the Air Force and ensuring our ability to train and remain combat ready to perform this function during any contingency.

Ancillary training requirements have been competing with our capability to prepare for and deliver our combat mission. We canvassed our units to identify the pressure points and just released a new requirement list that significantly reduces the numbers considered absolutely essential to our Expeditionary Aerospace Force culture. This has resulted in a reduction from 530 previous requirements to 69 current ones—of which 53 apply to the Air National Guard. This gives our men and women more effective time to focus on mission and weapon system specific training.

In addition, we are pushing for increased utilization of Distance Learning methods for training requirements that reduce the burdens of time, travel and expense for our people—and compete with AEF commitments. The Air National Guard Warrior Network now reaches more than 202 sites throughout the nation and broadcasts training from 3 major training centers. In addition, the Air Force and Air Force Reserve now share the same satellite system. This gives us expanded access to mutual training programs. In addition, we were primary members on the DOD compensation Integrated Process Team which recommended methods of payment to our people who conduct Distance Learning training away from their respective units. We can now operate smarter and better for our dedicated people. Our expeditionary requirements demand new approaches.

These warriors are doing the jobs they've trained a lifetime to do and they are doing them with great attention to safety. Command emphasis and leadership has made the difference. Over the last decade the Air National Guard has become the model for safety. We are starting the new millennium on a very positive note for flight, ground, and weapons safety programs.

Despite the increased OPTEMPO, PERSTEMPO, and the first cycle of the Expeditionary Air Force, we have accomplished another outstanding safety year. The Air National Guard ended fiscal year 2000 with a rate of 0.89 flight mishaps per 100,000 flying hours. Fiscal year 2000 ties the record established in fiscal year 1998 as our best year ever for Class A flight mishaps.

For the world's most effective, engaged, and employed reserve component, our Air National Guard capability in the future hinges on effective weapon system modernization and recapitalization—along side our Active Component. We need to ensure that our people are armed with the best and safest equipment our active component operates. Of the seven major weapon systems the Air Force operates, the ANG has—on average—the oldest systems in every one—except the C–130. Our readiness continues to be strained due in large part to aging aircraft, lack of spare parts, and increasing workloads associated with both. Our Air National Guard modernization efforts and roadmaps continue to push the envelope for all airframes. We are still focused on our Combat Quadrangle and AEF support with priorities given to precision strike, information dominance and battlespace awareness through Data Link/combat ID, 24-hour operations and enhanced survivability. Our "medium look"—extended to 2010—focuses on structural integrity and engines and keeping our airframes lethal. Our "long look"—out to 2015—projects the future missions and their impact on an expected decreasing force structure with a focus on seamless forces and capabilities across the Total Force—and our ANG preparations for this future.

Your support and funding have enabled us to make some major in-roads this year and set the foundation for continued improvements. Let me bring you up to date on some of these now.

The ingenuity of Air National Guard has made positive, mission impacting strides for our total force. Recently, our unit in Tulsa, Oklahoma conceptualized, assisted in the development and testing, and fielded a down-sized Low Altitude Navigation and Targeting Infrared for Night (LANTIRN) pod test station. The previous legacy test station used in the Air Force, LANTIRN Mobile Support Shelter (LMSS), is currently considered too large to be moved effectively to support contingencies due to the airlift it consumes. The new downsized test station fielded by the Air National Guard gives the Air Force an optimum deployment LANTIRN support capability that is otherwise not available.

Thanks to your support, the ANG F–16 pre-block 40 fleet now possesses full front line combat capability. Your continued support is vital to our efforts to continue these critical programs and remain a fully relevant Total Force partner. Our Block 25/30/32 jets are capable of employing Precision Guided Munitions (PGM) by means of a self-designated laser targeting pod. Our next group of pods are due for delivery in the March 2001 through February 2002 time frame, which combined with prior purchases will give us a total of 64 pods in our fleet. We still need 96 more pods to fill our one for one requirement. Until then, by sharing existing pods, the Air Guard will fully train nearly 22 F–16 pilots by 2003 and will fully equip all units by 2006.

In the last six months, all of our Block 25/30/32 jets were wired for the Global Positioning System (GPS) giving us precise navigation and target acquisition capability. At the same time our Night Vision Imaging System (NVIS) was completely installed on our F–16's giving us 24-hour combat capability. Combined with installation of the Situational Awareness Data Link (SADL) we have significantly improved our F–16 Fleet—thanks to your significant support. Our focus now is on full support for "Falcon Star"—a structure modification program that significantly extends the service life of this airplane. When we add a new capability—the Theatre Airborne Reconnaissance System or TARS—our F–16's become increasingly viable as both a weapons delivery system as well as an information exploitation platform. For those of you who may not be familiar with the TARS capability, let me take a few minutes to highlight its features. TARS will return the manned tactical reconnaissance mission to the Air Force. In keeping with the modern battlefield's need for a responsive kill-chain, TARS improves the Air Force's ability to find, identify, and engage mobile/relocatable targets. Our current capability includes two electro-optical sensors for day, under the weather reconnaissance. We are working closely with our industry partners on an improvement package to add synthetic aperture radar (SAR), a datalink, and the high bandwidth necessary to make this system an all-weather, day or night sensor. We will demonstrate the ability to gather and relay critical information through the datalink to the Air Operations Center (AOC) this summer. If successful, the result will be bombs on target within single digit minutes.

With a focus on Precision Guided Munitions capability, combined with Falcon Star engine and structure modifications and TARS, the Air National Guard F–16 block

25/30/32 community will provide the bridge to the next generation of power-projection precision combat systems.

But our fighters don't get to the fight or get home safely without the efforts of our stalwart Tanker fleet. Increasingly, our Air Guard modernization focus has shifted to necessary improvements in our KC–135 fleet and we need to accelerate the R model conversion kits. Over the last year, with the assistance of our Adjutants Generals, we developed a consolidated plan that includes the purchase of 100 R conversion kits at a rate of 16 per year. This would fix two full squadrons a year over the next six years. Up until now, the Air National Guard was at the front of this push. There has recently been a significant increase in support for expediting the "E to R to X" conversion. With the Pacer Crag upgrade completed this time next year and the Global Air Traffic Management (GATM) kits buy beginning the same time, we are well on our way to serious improvements in our Air Guard tanker assets. With our anticipated addition of Situation Awareness Data Link (SADL) the Air National Guard, once again leads the way for issues that directly effect future expeditionary operations. With nearly half the entire air refueling mission, the Air National Guard must not let tanker modernization issues be ignored.

Our F–15s led the Air Superiority role in AEF 9 in Southwest Asia while continuing their air sovereignty alert requirements at home. Thank you for the support you have given this valuable weapon system as we struggle to remain viable versus ever more capable threats. The $26.4 million you added for the Bolt-On-Launcher (BOL) for advanced infrared countermeasures and the $17.5 million added to complete installation of the Fighter Data Link (FDL) ensures the Guard F–15s are able to face the threats being faced during their AEF rotations. I am still concerned with the long-term reliability and sustainability issues associated with this aging aircraft. We need to study the future of this community and consider the implications of Air Force F–22 purchases. Our current plan is to realize the benefits of Air Force F–15 flow downs. The current Air Force F–22 program anticipates the ANG in an associate role and we are hopeful that in the future there will be a unit-equipped role.

The focus over the last year for our A–10's has been to insure precision engagement capability that includes SADL, Targeting Pod integration, DC power, digital stores management system and a 1760 bus. Last October, we began the Air Guard installation of the new countermeasures management system at Bradley Air National Guard Base in Connecticut, which will be complete in two years. By doing this ourselves we save the Air National Guard nearly $3 million. In addition, the A–10 has received some additional support this year—coming off their significant contributions to Operation Allied Force.

However, in some circles, the A–10 is still perceived as a "cash cow" and reprogramming could jeopardize our initiatives to upgrade these systems. We are looking at more commercial off-the-shelf (COTS) engine solutions to save money and still improve the capabilities of this first-called, most-used "hog."

Our Kansas and Georgia Air National Guard B–1's made history on October 13th this year when they became the first Guard aircraft to successfully drop America's newest smart bomb in the Utah Test Range. These Air National Guard B–1s scored direct hits on their targets using 2,000 pound Joint Direct Attack Munitions (JDAM). This is the same smart bomb used with devastating effects by B–2s in Kosovo. The 8 Air Guard B–1Bs—which can carry 24 JDAM versus the B–2's 16 and the B–52's 12—now possess more precision striking power than all the allied forces delivered on the first night of Operation Desert Storm. On hand to witness this historic event was General Richard Myers—the Vice Chairman of the Joint Chiefs of Staff. At the completion of the flight, General Myers said, "I am extremely pleased I had the opportunity today to participate in the first live JDAM mission flown by the Kansas Air National Guard in a 184th Bomb Wing B–1B aircraft. This mission once again demonstrates the ability of our reserve forces to perform to the highest standards." In addition to the new use of laptop computers connected to hand held global positioning systems that give our B–1s better threat avoidance, this new capability increases the effectiveness of our B–1s by more than 2,000 percent. We still have issues to work like the lack of independent and expensive Readiness Spares Parts (RSP) kits—though we have achieved success in establishing the requirement over the last year. The addition of Beyond the Line of Sight (BLOS) Data Link—a 2 way link that provides near real time target and threat information, as well as Defensive system upgrades and Airborne Video Tape recorder answers a growing call for long range strike capability.

We still require the C–130 cockpit armor as mandated by USCENTCOM, to make significant improvements in the survivability of our fleet while supporting AEF taskings. With increasing reliance on our tactical lift workhorse we need defensive countermeasures systems and battlespace situational awareness capabilities that

allow us to operate in hostile conditions and to counter the prolific Infrared (IR) threats. We continue our work to bring the full complement of C–130J aircraft to Air National Guard Units in Maryland, Pennsylvania, Rhode Island and California. In addition, our Air National Guard unit in Harrisburg, Pennsylvania is converting from their EC–130Es to the EC–130Js cross-decking the special mission equipment that makes this one of a kind psychological warfare mission possible. We are progressing in this "revolutionary" program working with all stakeholders to iron out the bugs that come with any new weapon systems. Our biggest Total Force issue remains the C–130 Avionics Modernization Program development. We expect contract award very soon, hopefully by the end of May. This $4 billion program will modify the C–130 fleet through 2013 making it viable well into this century.

We are striving to move the C–17 conversion forward at Jackson, Mississippi—replacing the aging and retiring C–141s. We are laying the groundwork for the necessary infrastructure and support requirements, however we harbor serious concerns regarding the associated funding. We continue to work for the bed-down in fiscal year 2004. With the current focus on strategic airlift shortfalls, many would hope for an increase in C–17 fleet-wide numbers.

The C–5 Avionics Modernization Program (AMP) is the first of a two-phased comprehensive modernization for the C–5. This program redesigns the architecture of the avionics system, installs All-Weather Flight Control System (AWFCS), Traffic Alert and Collision Avoidance System (TCAS), Terrain Awareness and Warning System (TAWS) and makes the C–5 Global Air Traffic Management (GATM) compliant. The AWFCS replaces low reliability Line Replaceable Units (LRUs) in the automatic flight control system and replaces aging mechanical instruments in the engine and flight systems. A GATM capability, which encompasses communications, navigation, and surveillance (CNS) requirements, will be concurrently incorporated into the aircraft to maintain worldwide airspace access well into the 21st Century.

The Reliability Enhancement and Reengining Program (RERP) is the second of the two-phased modernization of the C–5 that improves reliability, maintainability, and availability. This effort centers around replacing TF39 engines with more reliable, commercial off the shelf (COTS) turbofan engine. This program also upgrades numerous other systems including: flight controls, electronics, hydraulics, landing gear, fuel system, airframe, fire suppression system, and pressurization/air conditioning system.

The 201st Airlift Squadron District of Columbia Air National Guard provides worldwide air transportation for Congressional Members/Delegations (CODEL), the Executive Branch, Department of Defense (DOD) officials, high-ranking United States and foreign dignitaries and HQ USAF inspection team travel. The 201st currently uses the C–22B fleet to meet team travel and CODEL missions but due to age and cost to upgrade, they are scheduled for retirement starting in October of 2001. The currently utilized C–22B is a 1964 model Boeing 727–100 aircraft. Congress recognized the need for a replacement aircraft and provided funding to purchase the first C–40C in fiscal year 2001.

The readiness levels of the Air National Guard depend on modern equipment availability. Adequate funding levels for Guard and Reserve equipment are becoming increasingly critical. Reserve components are being called on to perform a greater share of day-to-day missions, as well as to relieve the high operational tempo for active duty forces. Compatible equipment is essential to reduced logistics costs and to enable active, Guard and Reserve units to train together. The equipment readiness goal is to ensure the Reserve Components have compatible equipment to enable mission accomplishment side-by-side with active forces and coalition partners.

A high state of readiness also depends on a robust infrastructure. Facilities in the Guard today run the gamut between those needing considerable work and those which have won design and construction awards. As a direct result of Congressional support nearly 50 percent of the Air National Guard facilities are adequate, and we thank you for that. Our working environment becomes our Quality of Life sustainment. We know that given the funding, we can produce right-sized, efficient, quality work places for our airmen. However, there are three barriers that stand in our way—an aging infrastructure, funding constraints, and the impact of new mission conversions, which consume available funding before current requirements can be addressed.

The recently published Installations Readiness Report for 2000 shows that of the six categories that apply to the Air National Guard, four were rated C–4. This indicates major deficiencies that preclude satisfactory mission accomplishment. Our backlog of maintenance and repair projects currently exceeds $1.5 billion.

The challenge of maintaining facilities and readiness has also provided opportunities to excel. We have undertaken several initiatives within the Guard to get the most out of every dollar. We continue to pursue joint projects at every opportunity,

have improved our execution strategies, and aggressively manage our funds to provide for reprogramming actions.

It is because of the exceptional people in our units that we continue to overcome these challenges. While we've put more on our members plates, we've done it smartly and with attention to bonuses, grade relief, grade enhancements and employer and family support.

Our current economic and recruiting climate has caused us to be more aggressive in our approach to recruit and retain quality members to support mission requirements. Our recruiting successes are a direct result of additional resources and initiatives, and heavy involvement by Adjutants General, Commanders and the members themselves. One of the major challenges facing our recruiters today is the shrinking pool of active duty accessions resulting in an increased reliance on non-prior service recruits. This increases the need for formal school training allocations. As a counter to that, we have requested additional recruiter authorizations. We will utilize these positions at every active duty Air Force Base. With an in-service recruiter at each location, the Air National Guard will offer the newly separated individuals a chance to remain in uniform while increasing the Guard's experience base and decreasing the shortfalls.

We take great pride in the fact that our retention figures for the past five years averages in the 90 plus percentile. Additional future recruiting and retention programs include enhanced high school presence by use of greatly expanded internet exposure, establishing retention focus groups across the five regions to identify root causes for staying or leaving, and maximizing current incentive programs.

The Air National Guard Incentive Program is designed as a monetary motivator to support critical manning requirements in units with skills that are severely or chronically undermanned. For critical skills, we offer maximum incentives and have increased the number of career field specialties eligible for bonus payments. We've succeeded in our efforts to offer Aviator Continuation Pay (ACP) to eligible Active Guard and Reserve (AGR) pilots who agree to stay with us for three years at $15,000 per year, or five years at $25,000 per year. In light of our increased operational tempo, we are actively pursing staff options to provide incentive programs for our traditional guardsmen.

Control Grade Relief at the unit level would provide the additional boost required supporting our full-time AGR force. We had over 350 deserving people awaiting promotions. Thanks to your efforts, we achieved success this fiscal year. The plan increases both officers and enlisted personnel and—through a domino affect—should help to alleviate the pressing problem. Through all these efforts, we made a difference for an Air National Guard force of seasoned warriors who deserve no less and are committed to more.

As the Air National Guard has become a total "expeditionary" aerospace partner, we are finding an increasing need for viable and sustainable external support for our members. Our readiness, retention, and volunteerism depend on our families' sense of belonging and participation, and on our employers' education and support.

Last year's focus on the "Year of the Family", coupled with the sustained AEF rotations, brought to the forefront the need for a formal family support program. We have many outstanding volunteers who give consistently and unselfishly like Mrs. Cindy Whitney, the spouse of a Maine Air National Guard member and first Air National Guard recipient of the National Military Family Association, "Very Important Patriot" Award. Mrs. Whitney supports our families at home while their loved ones are deployed with the Aerospace Expeditionary Force (AEF) cycle. However, when we researched how Air Force and Air Force Reserve Command handled this requirement, we found some very interesting and telling information. The Air Force currently allocates through their Family Support Center staff and operating budgets alone, $125 per member; Air Force Reserve Command—programmed in the Air Force POM since Desert Storm—spends $58 per member with an expected increase to $70. The Air National Guard last year took $750,000 out-of-hide to provide a $7 per member allocation using additional duty staff or unpaid, overburdened volunteers. This is clearly not enough. The Air National Guard intends to make available a fulltime contract family readiness coordinator at each unit. This full-time dedicated contract capability will give the wings and states the help they need to support our nearly 350,000 family members. This action does not change any part of the existing National Guard Bureau Family Program structure except to add dedicated capability to the wing levels.

Under the great leadership of Maj. Gen. Paul Sullivan of Ohio, we've brought together an Integrated Process Team (IPT) to develop childcare alternatives based on demographic needs at the unit level. This IPT has moved forward at breakneck speed. This past January, the Air Force sent out a letter to all their child care centers permitting children of National Guard members to participate when space is

available. This includes the extended hour program that can be used for drill weekends. All Department of Defense child care facilities are being asked to do the same.

Phase 2 is a pilot program that will establish civilian child care for our Guard members at units not co-located with an active duty base. This subsidy will be based on the Guard member's total family income. The pilot will test both full-time and drill weekend child care. The pilot sites include Air National Guard bases in New York, South Dakota, Wisconsin, Idaho, West Virginia, Missouri, Iowa, Minnesota, Vermont, Arizona, Ohio, Mississippi, and Arkansas.

This past January, we began to focus on critical enablers and partners—the employers of our National Guard men and women. The year 2001 has been designated "Year of the Employer". Over the last 10 years, employer awareness, understanding, and support have become vital to our ability to meet our requirements. We must continue to strengthen our relationships to solidify our readiness and relevancy. If our employers aren't happy, our Guard men and women aren't happy. We need to make it easy and valuable for both to participate. If we don't, we lose a fundamental Air National Guard core competency—protection of our citizen-airman and soldier heritage.

During the year, we will partner with the National Committee for Employer Support of the Guard and Reserve (NCESGR) to ensure our employers remain satisfied with our "shared" people and their dedicated commitment to continued military service. At the same time, we have an opportunity to increase the visibility of the military in the communities to help the Total Force bridge the growing civil-military gap. In our effort to educate America's employers, we educate a large community of leaders on the mission and values of military service.

We've already taken large steps toward this goal. We've made participation for today's employers easier by our Aerospace Expeditionary Force (AEF) predictability and stability. We've ensured a dedicated rotator to get our men and women to and from an AEF location. We've identified employer support in our Strategic Plan. We've taken the lead to establish a Reserve Component Airline Symposium where we meet with the nation's airline industry's chief pilots. These are but a few of the initiatives taking hold as we focus on the "silent partner" behind all of our men and women. The importance of the family and employers can best be summed up in the words of 13 year old Jennifer Causey, the daughter of a Wyoming Air National Guard member who wrote, "I think Guard families matter because productive members raise new generations of productive and proud Guard members. They know what to do and the level of commitment it takes. They know all the hard work that the Guard member goes through, not only on the job in their civilian occupation but also at the Guard and in their relationships at home. They also know the pride and integrity it instills to be able to serve your country in a dual role as a military member and civilian community member. I think if you are a Guard member, you should have a lot of self-respect. You have earned it."

Mr. Chairman, we in the Air National Guard are proud to serve this great nation as Citizen-Airmen. Building the strongest possible Air National Guard is our most important objective. Our people, readiness modernization programs and infrastructure supported through your Congressional actions are necessary to help maintain the Air National Guard as the best reserve force.

Mr. Chairman, we count on your support to continue meeting our mission requirements. We are confident that the men and women of the Air National Guard will meet the challenges set before us. I thank you for allowing me this opportunity to give you the Air National Guard posture.

Senator STEVENS. Thank you, gentlemen. We will see if we can put that last item in the supplemental so we can do it on your watch.

RECRUITING

I am still worried about this recruitment problem. Let me ask you just generally, do you really have the assets and the funds to recruit properly now, General Davis?

General DAVIS. Well, sir, in both the Army Guard and the Air Guard I would defer to my two specialists in the Army and Air Guard, but in general we do not have enough money, I do not think, to provide all of the advertising we would like to have.

Senator STEVENS. What about active duty personnel. You said you wanted active duty. Do you need it there, too, in recruiting?

General DAVIS. Yes, sir. You have to have so many contacts in order to get enough contacts to bring in the number of people we need and require to make sure we make our end strength. For example, the Air Guard was on end strength last year. The problem was, they increased by 1,300 people, so we need about 100 additional accessions per month, net.

Senator STEVENS. I thought with the Montgomery money that you would be doing better.

General DAVIS. We are, sir, and that has helped enormously. One of the reasons we have the retention rate we have is because of the Montgomery GI bill and, as you are aware, sir, many of the States have additional programs that are State-funded to allow for tuition offsets or whatever.

Senator STEVENS. That all folds into the Reserve Officers Training Corps (ROTC), does it not?

General DAVIS. No, sir, it is not a part of ROTC. If you join the National Guard in Ohio, as an example, you get a 100-percent tuition abatement if you go to a state school in Ohio, and one of the problems we have had with the Guard in spots is that if a state adjacent to yours offers it and you do not, the kids from your state are going to go next door and join the Guard, but that is independent of the relationship with the ROTC.

We do have in the Army Guard a simultaneous membership program, where you can belong to the ROTC and the Army Guard. General Schultz can address that. But generally speaking we need enough recruiters, both Army Guard and Air Guard, just to make those contacts. You have got to have so many contacts with people who are potential candidates or recruits in order to get, and narrow it down to where you can find that quality candidate that you actually come out and swear in and join and go to school and qualify and return to the unit, so we do need additional recruiters in both the Army Guard and the Air Guard, and additional funds for recruiting and advertising.

General SCHULTZ. If I could, Mr. Chairman.

Senator STEVENS. General Schultz, I was just going to ask you, I am told by our staff that you are short more than 5,000 company grade officers and 1,500 warrant officers.

General SCHULTZ. Correct.

Senator STEVENS. Why is that not tied in to ROTC?

General SCHULTZ. It is tied into ROTC. What we are missing today is accession through ROTC. In the past couple of years, the Guard and Reserve have had fewer than 200 members arrive in our units from the ROTC program, which is simply not enough for normal activity and normal turnover, plus the Officer Candidate School (OCS) graduations, plus those coming off of active duty, just simply fall short of our total requirements.

So while I tell you that our enlisted strength is in pretty good shape, we are short commissioned officers at the company grade level. The majority of the reasons are, as I look at why officers are leaving today, just resignation, other interests, other priorities, and so we are looking now at incentive programs to keep the officers in. Today, that is not possible.

Senator STEVENS. Well, have you done exit surveys? Is it the long-term deployments?

General SCHULTZ. The schedule and pace of things, is one of the reasons they leave. Long-term deployments overseas is another. What we found about deployments overseas is, the turnover in those units is not much different than any other unit, so it is not just the overseas part. It is the schedule that we ask units to be a part of during our normal training cycles that I think is a piece of the problem, and some of this we are dealing with inside the Army.

Senator STEVENS. What are you going to do about the shortage of officers?

General SCHULTZ. Well, one, we are working with the Deputy Chief of Staff of personnel, increasing the ROTC graduate flow into the Guard units. That is step number 1.

The other is, we are encouraging the Adjutant General's through the State OCS programs to increase the students in those programs and in those categories we are simply not producing enough graduates in OCS today, Senator. We had 800 officers graduate last year, and that is just not enough for a force the size of ours.

General DAVIS. We have some disincentives, too, sir, when young kids are in a tuition offset program, or a tuition payback, if they are still on student loans, if they go to OCS, the program automatically stops the payback on their loans, the student repayment of loans, and so we have got some glitches within the system, and we are working all of those out, and some of the specifics of that, but that is one major inhibitor, sir.

Senator STEVENS. Is that an administrative problem, or a legislative problem? Beyond that, do you not have some money to help pay off student loans on the basis of recruitment?

General DAVIS. We do in terms of bonuses, sir, but not otherwise.

General SCHULTZ. We have money for our incentive requirements, but when you ask how much money do you really need, we move money around internally to cover our soldier incentive based programs, and so we do have enough money, but that is after we reprogram internally.

Senator STEVENS. But if you pick up people who did not get money during their college years, under Montgomery, or assistance, and they are going to enlist, you ought to be able to pay some of their student loan money, the debt that they incurred as they put themselves through college.

General SCHULTZ. And we do, we have programs that qualify.

Senator STEVENS. Are they equal? Can you give them enough of a payback?

General SCHULTZ. I will take that, Senator, for the record, and give you some detail on that. I do not have all those numbers with me right here.

[The information follows:]

STUDENT LOAN REPAYMENT PROGRAM

The Student Loan Repayment Program (SLRP) is governed by Title 10, United States Code, Chapter 1609, Section 16301. The program is for enlisted members of the Reserve Components and there are certain eligibility requirements that must be met to receive these benefits.

Individual soldiers must complete one year of total service. Soldiers must also complete Initial Active Duty for Training. The loan must be at least one year old and the amount can be no greater than $10,000. The SLRP pays $500 or 15 percent,

whichever is greater, of the original balance once a year on the anniversary date of enlistment. Payments are limited to $1,500 per year.

A soldier attending OCS who is eligible for SLRP retains eligibility up to the date of commissioning. Once the soldier accepts a commission SLRP is terminated. A soldier attending OCS may take advantage of the Tuition Assistance Program at $3,500 per year. Tuition Assistance is available to officers and is not terminated when a soldier accepts a commission.

Senator STEVENS. Well, I think we gave the General Service people, the Federal Government the right to pay up to $5,000 a year for what, 5 years or something?

General DAVIS. We have that, sir, but when a young soldier enrolls in Officer Candidate School he loses that tuition repayment.

Senator STEVENS. Well, again, tell us, is that your regulation or our law?

General DAVIS. I think it is the law, as I understand it.

Senator STEVENS. We can change it in the supplement, if that is the case.

General DAVIS. We will work with your staff on that, sir.

Senator STEVENS. You talk about jump-starting. It seems to me you need to jump-start the program. You cannot get that far behind on your warrant officers and your young officers and catch up. There ought to be some concentrated attempt to get those people in. We are now paying some of our staff debt for college loans in order to retain our people, and you are going to have to do the same to attract them.

General DAVIS. Yes, sir, we agree.

Senator STEVENS. Gentlemen, I have to go chair the other committee. Will you finish this up, please?

Senator INOUYE. Thank you very much.

MORALE

Following up on the questioning, we have many problems, as I noted with the first panel. Added to that, I note that between 1945 and 1990, that is 45 years, the Guard and Reserves were involuntarily activated four times, Korea, Cuba, Vietnam, and Berlin. In the last 10 years you have had five activations: the Persian Gulf War, Iraq, Haiti, Bosnia, and Kosovo. How is the morale?

General DAVIS. Well, in general the morale is pretty good. It is excellent, as you go visit the young people over in Bosnia, and you visit the folks in Kosovo and Southwest Asia, both when they are there as well as when they come back home. They feel good about what they did. They joined the Guard to do a mission, and they are doing a mission.

I would say to you in the Air Guard we do most of what we do in those missions, at least the last few we have done, with the exception of Allied Force. In the Air Guard we are able to do that with volunteers, not under the presidential Reserve callup. In the Army Guard, we are using presidential Reserve call-up, and originally it was 9 months, and that created some real consternation, and some difficulty for us.

In working with the active Army both here at the headquarters with General Shinseki and his staff, as well as the forces Command down in Atlanta with General Hendricks and his staff, we have been able to get that reduced to 179 days in-country. Now, having said that, it ends up being over 200 days, because there is

a train-up time, and there is a demobilization time on the back end.

But the discussions that have taken place, and we are working on a program now to send some military police over this fall, and they are going to look at 90 days. You will have a group that will stay as kind of a key cadre, that will stay for the entire 179 days, but some of the individual soldiers will be there for 9 months.

Now, this is the kind of program that we have run in Central and South America, in our construction programs, road construction programs and vertical programs for years, sir, where we have a duration cell we call it, or a duration cadre. They are there for 4 to 6 months, and we rotate units in and out, and they provide the command and control structure, and the leadership and management structure for that.

So we are looking at some of those options. General Schultz may want to comment a little further.

General SCHULTZ. Senator, in terms of morale in the Army Guard today, we are exceeding our retention objectives, which would mean the number of soldiers which we had planned to have extend, so using that as just one indicator, I think we are pretty healthy.

I am concerned about turnover though, soldiers that leave for other reasons, employment, family, perhaps maybe the schedule of our activities, perhaps we plan for about 18 percent of our units to turn over every year, and we are at 18.5 right now, which means we are just a little bit higher than we had programmed, but if I take you back to last year, we ended the year at 19.6 turnover, which means that those soldiers just leaving our unit for whatever set of reasons, now that meant for us we had to enlist almost 7,000 more soldiers than we had planned for.

Now, if I could just take that for a second into our discussion we had with the previous panel, what that means is, we had more nonprior service members than we had planned to send to the Training and Doctrine Command, so that means we do not have school seats in the right places or money in the right places, but overall we are making progress with our attrition and the question on morale, sir, and I think we are in good shape today.

Senator INOUYE. How about the Air Guard?

EXPEDITIONARY AEROSPACE FORCE

General WEAVER. Mr. Chairman, if I could show you the retention rate as I stated earlier, well over 90 percent in the Air National Guard, if you look at all the units across the board, the EAF has been a godsend to the Guard and Reserve for us. It has allowed us a foot in the door. In fact, the door is wide open to us in the Reserve component in our Air Force to do the real-world stuff that we have been trained for many years to do.

The aviation is not just the pilots now, it is the support personnel that are standing up and going for 2 weeks at a time in the Air National Guard and the Air National Guard under our concept of deploying, and when they are coming back, if you could only talk to them as much as we do, the basic comment is, we regret that we could not stay longer.

They are doing what they have been trained to do. The morale in those units now is higher than it ever has been, and so it truly has been a tremendous success story, the EAF and our Air Force, led by our Chief of Staff and then Secretary Peters, who instituted the EAF.

RECRUITING

If I could go back, where we can save money is, as we have gone in with a request this year for additional recruiters, something the Air National Guard that we have not done before is to recruit on active duty installations. That is not to say to recruit people off of active duty, but to be there to inform people who are making a decision whether to stay in or not.

We prefer them to stay in, but if they do opt to get out, we would like to have them consider the Guard and Reserve, and so we have begun recruiting on active duty installations, something we had not done before, and the paid recruiting campaigns that we have started last year with your help, we had not done that before, so when I first came in the Guard after 8 years on active duty it was about a 90–10 split, about 90 percent active duty in the Guard, versus 10 percent home-grown.

Now, that figure is about 60–40, 60 percent from active duty. We can save more money in training by recruiting on active duty installations for those people getting out than we could by setting up expensive training schools. The Air Force has stood up to the requirement of our additional nonprior service and their training programs as well.

PAY AND ALLOWANCES

There is one other part of that, and the pilot part of it, and I have discussed this with many of the staff members, and that is to increase our bonus, or our Aviation Career Incentive Pay (ACIP), for our air crew members across the board. Our Active Guard and Reserve men and women who are flying, we have given them the partial pilot bonus, the one-thirtieth rate, but I think we need to stand up as an organization and provide our ACIP, that is, a full month flying pay for our air crew members same as active duty pilots.

We lose about 215 pilots a year out of the Air National Guard. They just do not go to the Reserves, do not go anywhere else. If you consider, each pilot, we put about $6 million worth of training. That is about $1.2 billion loss. If I retain six pilots because of giving them a full ACIP, I will have paid for that loss over and over again. I think it is something we really seriously need to consider.

INCREASED OPERATIONAL TEMPO (OPTEMPO)

Senator INOUYE. What is the employer reaction to your increased OPTEMPO?

General DAVIS. Well, sir, it has happened in a couple of instances where we have had, and we are aware of, where the employers have not treated the people very well when they returned. We have a system for that through the support, National Committee for Em-

ployer Support of the Guard and Reserve, and we have ombudsmen who handle these things.

One of the issues they are most concerned about, generally speaking, they are concerned about the increased level of activity, but their concern manifests itself a little differently in a very small company. We are finding particularly those companies, those smaller than 25 people, if one or two members of the Guard are called, they really get concerned. It is a high percentage of their workforce, and they are concerned about that.

It can take a very key member of a firm that is, say, 10 people, because you do not have a lot of duplication or replacement people, and so there is a lot of concern at that level, but we have been working with the U.S. Chamber, and we have done some surveys, and we think that if we can give the unit enough time, so they know when they are going to go—we have been able to do that in both the Army Guard and the Air Guard, and one of the things, that has brought both designating the rotations to Bosnia and Kosovo far enough ahead of time, identifying the units, which General Schultz has been able to do in the Army Guard, the Air Expeditionary Force, where we know now what the rotation schedule is and when the unit is in the queue.

That has really helped. That information passed back to the employer, has really helped dampen a lot of the early criticism we had. It was almost as if somebody came up and walked in the door and said, oh, by the way, I will be going tomorrow for 9 months, and some of them did not—the Guardsmen on our side of it did not communicate as well with the employers as they could.

There are some employers who are concerned about it. We hear anecdotally that some folks are not hiring people because they are in the Guard or in the Reserve. That is against the law, we all know, but some folks may attempt to do that, but it is not pervasive, as best as we can determine. If we can tell the folks ahead of time when they will be gone, most of our employers are working well with us.

As General Weaver said, we have designated the year 2001 as the Year of the Employer, and we have got a lot of additional things we are doing this year. Every year is a Year of the Employer in the sense that we try to work with the employees. We have got some very specific efforts we undertake each year to keep the employers better informed and make them know more about what we do, to educate them on the mission.

Last year we had a trip to Europe, sir, and we were taking over some civic leaders so they could see what the Guardsmen do when they deploy forward, and one gentleman had written a letter and said, I do not know why the Guard is doing that. The Guard ought to be here at home, doing the missions here at home. We have got no business being overseas.

So we had mailed the letters out a little before that, and so my exec said, why don't we send him a letter. He went with us. On the third day he was there he wanted to become part of our Speaker's Bureau, sir. He just did not understand. He was saying why we should not be over there, we ought to be here, because he thought we ought to just do things like hurricanes and floods and

that kind of thing, and respond, but our young people join partly because of the adventure.

They want to go overseas. They want to do some of those things. They get a good sense of service. If they join to become a mechanic, they want to be a mechanic. If we put them busy doing mechanic's work, or doing infantryman work, they will hang around and they will stay. If we do not do that with them, then we have difficulty retaining them, and so interest and training in those kinds of things become very key.

The employers, if we can educate them, and we can spend a lot of money and a lot of time working with them to take them on BOSSLIFT and to educate them about what we are all about, and outreach to them, I think we are doing a lot better job with that, and we are not hearing the hue and cry that we initially heard about employers.

So we are not seeing a mass effort by employers, or even a significant effort by employers who say, you cannot take our employees, but the smaller employee, there are some issues there, and I think the first panel you talked to, they discussed some issues and incentives for the employers, some recognition programs, that kind of a thing.

I think something like that is along the lines we need to address the issue. There is a problem there, sir, and we have to make sure we are addressing it. We do not think it is at a level that it is not manageable, though, at this point, sir.

Senator INOUYE. Thank you very much.

Senator Cochran.

DEPLOYMENT EXPENSES

Senator COCHRAN. Mr. Chairman, thank you. In September there will be over 500 soldiers with the Mississippi National Guard deployed to Bosnia as a part of the peacekeeping effort there, and I have received a copy of the training schedule that these soldiers will follow, and I think the first training experience, designed to equip them with the knowledge and experience that they need to do their job in Bosnia, starts later this month at Camp Shelby, Mississippi, and I hope to be able to visit them and wish them well as they undertake this mission.

My question to you is, we are probably going to have a supplemental appropriations bill for defense needs. Are the funds that you have in your budgets now adequate to take care of the specialized training and the deployment expenses required of these troops and these units so that we can be assured that they will be fully and adequately trained and be able to do their job, and be able to come home safe and sound?

General SCHULTZ. We have already received one personnel reimbursement in contingency operations (CONOPS) this year. We anticipate one before the close of the year. The operations and maintenance side is an issue that I have had a couple of discussions about, and that is that we expect States to take money from their current budgets and invest early in some of their training activity with an understanding that we are going to find money for them later in the year.

Now, there is some risk in that, as you know, so in the case of personnel, we have money in the right places for the unit's requirements to train up. In the case of operations, I have a couple of examples where the corps commanders, in talking with some of the units they are going to join in the Balkans have not, in all cases, approved training activities, so I am working some individual issues, and if you would like, I will provide detailed account of what that means to us.

What I am saying to you today is that the investment Mississippi has made in the training rotation now for this unit, I will find the resource so they do not pay a penalty for being part of the mission set that we did not properly resource, so that is an obligation that I carried to fix a piece of an issue down there with regard to an operations fund redistribution.

General DAVIS. Senator, I am certain you are aware, when that was the National Training Center, the superb job they did out there at the time as a result of the kind of training we got in preparation for that. A lot of that training will be residual in the sense that it will hold over because these soldiers will have been through a really dynamic training environment out at the National Training Center at Fort Irwin, and they will not have to train nearly as hard in terms of the basic skills.

Now, proficiency, yes, they will have to get up to speed on proficiency and that kind of thing, and they will do that with great regularity as they walk through this. We call it the Road to Bosnia, these milestones they go through, and the training chart you saw that takes you through the different training events.

Senator COCHRAN. Well, we are very proud that they are going, and we know the employers have been briefed, and we are hopeful that that can all be a model for deployments in the years ahead. We are proud of those who are serving from our state.

C–17 CONVERSION

One other thing we are very proud of in Mississippi is that the Mississippi Air National Guard in Jackson will be the first unit in the Nation to convert from the C–141 transport aircraft to the modern C–17. You mentioned that, General Weaver, in your opening statement, and we appreciate the attention that is being given to preparing for that transition.

We know there are some infrastructure requirements, and we are worried a little bit about the pace of that, whether the funding is being made available and enough work is being done so that when that date comes, the people will be trained to fly the aircraft and to maintain them, and will have the facilities to do that and we will not have to wake up one morning and say, well, they are not ready, we are going to postpone this. Can you tell us something of your impression of the timetable, and are we meeting the targets? Do we need additional funds in this bill to help do that?

General WEAVER. Right up front, sir, this needs to be a template for all of our C–17 conversions, which I know we will have more than just Jackson following and stepping up to the C–17 requirement. It is an outstanding aircraft. We are pleased and honored to have that in the Air National Guard, and especially at Jackson as we look at Air National Guard installations for a beddown location,

so that is why the importance of this being a template right there at Jackson.

We have got some financial concerns. This is the first time in our history that we have undertaken a conversion, not of this size, but of this nature. That is, a brand-new aircraft coming right off the line, right into an Air National Guard unit. We have done it with F–16's, but not one of this nature, of a large aircraft, so there were unexpected and unforeseen challenges we in the total force have uncovered between now and the time that we want to get Jackson fully stood up.

The O&M part I am not as concerned with as I am about the military construction requirements, to have everything in place for the arrival of these first C–17's, so I do believe that yes, we will need some additional help, but I believe that on the O&M side, as far as the training, I believe we can work that within the Air Force community itself, but on the military construction side, we will need some help, sir.

MILITARY CONSTRUCTION REQUIREMENTS

Senator COCHRAN. Well, I hope you will provide for the record what you need specifically and what your needs are exactly. I have some notes that indicate some of the possibilities, but it would be really helpful.

General WEAVER. I will submit that for the record.

[The information follows:]

MILITARY CONSTRUCTION REQUIREMENTS

The first project supporting this beddown was an fiscal year 2000 Congressional add. The remaining program is phased over fiscal year 2001–04 to keep the existing C–141 mission operational until the C–17s are ready. The additional projects are as follows:

[Dollars in thousands]

Fiscal Year	Project Title	Cost	Status
2000	C–17 Flight Simulator Facility	$3,600	Construction
2001	C–17 Corrosion Control/Maintenance Hangar	12,200	Design
2002	C–17 Facility Conversion	16,500	FYDP
2003	C–17 Fuel Cell Hangar and Shop Upgrades	25,000	FYDP
2004	C–17 Maintenance Training Facility	4,100	FYDP [1]
	C–17 Short Field Runway (Camp Shelby)	9,000	([2])
	C–17 Upgrade Corrosion Control Facility	5,700	([3])

[1] This project is late to need. $15 million in equipment was appropriated in fiscal year 2001 for a fiscal year 2003 delivery. The supporting facility should be funded in fiscal year 2002 to be ready when equipment arrives.

[2] The shortfield runway is required in fiscal year 2004, but is not shown in that year of the Future Years Defense Plan (FYDP) due to the limitations associated with the fiscal year 2001 Senate Armed Services Committee (SASC) language that reduced the ANG FYDP size.

[3] Discussions are underway for development of a regional aircraft paint facility (corrosion control). This total force capability requires additional construction which is currently unfunded. The project could be executed as early as fiscal year 2002 if funds were available.

A related project that supports maximum utilization of this new C–17 aircraft is an Expeditionary Forces Center, $7.5 million. This deployment complex is currently programmed in fiscal year 2008 and would support the outload of troops and equipment from Jackson, Mississippi (MS).

FULL-TIME MANNING

Senator COCHRAN. I understand also that there is, I think we made a statement, or heard a comment about the full-time support of units to people back at the armories. I think General Schultz mentioned this. There is a shortfall in the support manning in the Army National Guard. Is this true as well in the Air National Guard?

General WEAVER. Not to the extent as in the Army, sir, but we do have a shortage of full-time personnel. What we were able to do, what Secretary Peters at that time and General Ryan allowed us to do in the Air National Guard is reengineer our Air National Guard to where we had units that were not wartime-tasked, that were not as required by our scenario, to reengineer those units into units where we really need them, whether it be on the flying line or air crew members. We were able to increase our duration, because of this reengineering effort.

We are presently working with the Air Force, an increase in full-time manpower through the future years defense plan (FYDP), bringing them in at a rate we are able to deal with in the total operating authority (TOA) of our Air Force, and so it is not as critical as I know of in the Army Guard, but as we step up to these additional taskings, such as the C–17, where it is required, where we will have an operations tempo equal to that of the active duty force, we will be looking for full-time increases.

C–17 AIRCRAFT AT JACKSON, MISSISSIPPI

Senator COCHRAN. One observation about a recent report. I understand General Robertson, Commander of the Air Mobility Command, and former Secretary of the Air Force, Peters, were on a trip recently suggesting that it would be better to have eight C–17 aircraft located in Jackson rather than six.

General WEAVER. Sir, I probably would not say this if I were not retiring, but I would say eight is what we have found to be economically correct, but I would venture to say that additional aircraft would also be beneficial as well, if we in our concept will be operating these aircraft at the same pace as the active duty force.

MANNING REQUIREMENTS

Senator COCHRAN. General Schultz, the exact manning requirements, I am told, in Mississippi have a shortfall of over 1,600, which is 40 percent full-time, talking about full-time support personnel. That is a big problem, it sounds to me.

General SCHULTZ. It is. We have across the Guard today, of our Active Guard and Reserve soldiers, 51 percent staffing of our requirements. The military technicians are a little higher than that.

Of course, when you look across the country it rolls up to a fairly significant number, so we have agreed with the Army staff over time to begin replacing those requirements. If you look at why we are in this condition today, over the last 10 years we have just simply lost full-time staffing over the years, save the last two, where the Congress came in and said, this is not right, we are going to help you recover, and so we have begun to recover but not nearly so fast as we would hope, and certainly when you hear from the

states, units in the states, they are the ones suffering, clearly, on a day-to-day basis.

Senator COCHRAN. Thank you, Mr. Chairman.

Senator INOUYE. Senator Leahy.

Senator LEAHY. Thank you, Mr. Chairman. To add to Senator Cochran's question, we love it when someone who is retiring testifies, because sometimes they get very candid, and I tend to agree with you on that. I suspect Senator Cochran does, too. This year I became co-chairman of the Senate National Guard Caucus, and I am going to be working with my fellow chair, Senator Bond, on some of these issues.

I would have been here the whole meeting but we have been having an issue of nominations to the Department of Justice, and we are holding a hearing upstairs, and I know Senator Hatch was probably terribly disappointed when I had to come down here.

HEALTH INSURANCE

But I did have some questions. General Davis, you and I have chatted before, but not on this particular issue. I am worried about health insurance for members of the Selected Reserve. I am told thousands of members of the Selected Reserve do not have health insurance, and I have heard about members—and this is anecdotal, but I think it happens all over the country—members of the Reserve components staying back from a deployment because they have failed their health screening.

Now, you have got an obvious issue, that of readiness, but I think there is also one of fairness. If the Selected Reserve is serving side-by-side with the active duty, it is very, very troubling to me if we are unable to guarantee health coverage of everybody defending the Nation. As Senator Inouye and others have brought out, we seem to be deploying a lot more these days. When we got these reports I just assumed everybody had health coverage, and I am wondering if there are programs such as TRICARE that we could extend to the Reserve. What do we do about these shortfalls in health insurance?

General DAVIS. Well, I might just start by making a statement. In one of our States they did a survey and they found a significant number of people, 30 percent, I believe, did not have health insurance.

What happened apparently a few years ago was, many companies decided that they would either get pay raises or increases in benefits, sustain the benefits, and a number of people opted to take the money, presumably to buy their own insurance and give up the benefit, but we have a large number of people who do not have any insurance at all, and in this particular State, his survey, he worked it where a number of people who responded said they would almost give up their drill pay, their weekend drill, for health insurance. It is very, very expensive in some areas, and certainly if you buy it on an individual basis. I used to be in the health insurance business a number of years ago, sir.

But it is something that I think we do need to cure. It manifests itself a couple of different ways, as we were talking, Senator Cochran was talking about. The training schedule for these people, there are breaks in the—they are on duty for 4 days, and then they

are off-duty, then they are on-duty again for another period of time maybe 2 weeks later, or 3 weeks later.

The difficulty is, if something happens to them physically during that time, or medically, they are not covered. If it happens during a duty period, they are covered, but during the days when they are not, they are not covered.

Our laws historically have been written to cover the Reserves primarily for a major mobilization of 30 days or more, or whatever. Many of the laws cover you if you are on 30 days or more, or more than 30 days, I believe, and so if you are on less than that you do not get full coverage for your family and everything else, so there are some inequities, particularly in terms of how we are utilizing the National Guard and the Reserve in today's environment.

My caveat would be, Senator, there is a bill that goes along with that, and none of us knows exactly what it is.

Senator LEAHY. Is that being looked at, though, I mean, some of the possible options in here?

General DAVIS. We are trying to work with a number of staffers, I believe. General Smith of Ohio is an individual case in point, and I know he is working with a number of—two or three members, I believe, at least one I know for sure and I think two others, and their staff, to look at what the cost might be for that. No numbers are available. The Adjutants General as a group have adopted that as a posture, and I think we will see some more activity like that.

Senator LEAHY. It is troublesome to me, and I know there is a lot of cost involved, but we either have them really available or not, and this may be part of it.

AIRCRAFT UPGRADES

Another area, General Weaver, the Air Guard flies over 500 F–16's, and most of them are either Block 25 or 30 versions. They look great and all of that, but they are getting old, and I am concerned that some of the operation costs keep going up, the mission-capable rates go down, and so you are kind of in a lose-lose situation. I am wondering what additional plans the Air Guard has to upgrade the F–16.

General WEAVER. We could put F–22's at all of our——

Senator LEAHY. Actually, I had not thought of that. It depends upon where they get assigned.

General WEAVER. Thanks to this body here, what is called as the Guard and Reserve Equipment Account (GREA), what we have been able to do with what you have assisted us in doing in the Guard and Reserve Equipment Account, we took the entire F–16 fleet, Block 25's, 30's, and 32's, and made them combat-capable. We did the Cupid mod. We are doubling their life. These F–16's in the Air National Guard are as capable as the active duty's Block 40's and 42's, thanks to this committee for all of that support in the Guard and Reserve Equipment Account.

It was only even just 4 short years ago where we had all of those F–16's, all 500 plus, and we could not go to war with them because we did not have the capability, and you all made that happen, and I cannot thank you enough, nor can those air crew members who fly them, especially when they are in Northern Watch and Southern Watch, and our active duty counterparts see these aircraft with

all that we have on them, not only the Cupid mod, but all the PGM, the lightning pods on them, and as we look forward to the advanced targeting pad (ATP) pod as well, the situational awareness data link (SADL).

These are full-up F–16's, and extremely well-maintained, and so my take on the future of our Block 25's, 30's, and 32's, the health of our fleet is good.

Could we use more? Absolutely. We are looking at attrition Reserve total force problem in some of our blocks, and we own some of those blocks, so yes, I would encourage future buys for our Air Force of F–16's. From my perspective that would trickle down additional aircraft for the Air National Guard and Air Force Reserve.

But sir, what you have been able to do for our F–16 fleet is nothing short of outstanding.

Senator LEAHY. I do not want to risk sounding at all parochial, not that anybody on this committee is ever asked a parochial question, but we do have F–16's in Vermont. I have checked them out personally, Mr. Chairman. I flew in one. That was before the Army, General Schultz talked me into a moment of weakness last year, or actually about 3 months before the Golden Knights were coming to Vermont.

They were coming to Vermont to do something with the Vermont National Guard, and somebody called me up and said, by the way, they have this program called a tandem jump, and you can jump with them, you do not really have to know much of anything, which is the first clue, how they get volunteers, and they said, why don't you jump with them, and I said OK, I would be glad to do it, thank you very much.

It is fine 3 months out, but it comes to about 30 minutes out from it, and I am wondering about this, but a very good man, a young sergeant, Marc Hoque, in the Army, a former marine—our son, who is a former marine, also named Mark, made me feel confident. We spent about 20 minutes strapping ourselves together, double-checking, we go up a couple of miles, look out the door, and I said, does that look like the fairground we are supposed to land on? I go, yep. Nervous—Nope—and out we went, had a great time.

We land, and he says, here, I'll unhook you. He goes snap, snap, and I said, that's it? That is all it took, just two quick snaps like that and you could have dropped me on the way down. He said, well, no, sir, I would not have done that, that would be a bad career move.

I said, your career or mine?

But at any rate, I cannot wait to do it again. My staff can wait. I cannot.

But the serious question, General Schultz, we have UH–60 Blackhawks up in Vermont, and there is a vast improvement. Over the old UH–1 Hueys. I know how hard they work to maintain them, but I got frightened just seeing our men and women flying them, because of what might happen. The Blackhawks are much, much better, of course. Everybody in Vermont was thrilled. My 3-year-old grandson even recognizes them by the silhouette when they fly by our home. He will say, "that is a Blackhawk."

But a lot of the Guard units are still flying the old Hueys and Cobras. I am worried about the safety of them, but I also worry

about the Guards ability to carry out its State mission. As you know, one of the great things about the Guard is that when something happens in your State, a rescue mission, a natural disaster, something like that, the Governor is on the phone immediately to the Adjutant General saying, "we need help." It looks to me like about 300 Blackhawks short around the country.

I am wondering what is happening. Are we planning to add more? Are we working on adding more? How do you retain the mechanics? How do you keep the training? How do you get young pilots to stay in and spend their time doing that?

General SCHULTZ. The short answer is, Senator, we have a need for Blackhawks in the Guard. We have Legacy aircraft. You mentioned both of them. That would be the Cobra and the Huey. We have 94 Hueys that fly in the Army Guard today. That is out of 400-plus air frames. The safety flight message on the rotor mast assembly is primarily the reason.

In our current plan, we are working right now on how to literally field the aviation modernization plan, and the Chief of Staff should make a decision very shortly on the implementation of that mod plan, and as we talk about this modernization plan, I just simply offer that we have seven States with no modern aircraft.

No modern aircraft means Hueys and that generation of systems, and so it is our idea, (1) to accelerate the fielding of Blackhawks, and we can use your help in that regard, and our other idea is that every State and territory would have modern systems. For us that would be at least the Blackhawk or the CH–47.

So we will retire the Cobras over time, we will retire the Hueys in the next couple of years, but as we retire the Hueys, one of the obligations that I carry is to have aircraft, literally, systems for the crews to maintain and the pilots to fly, and we come up short on that today.

So there will be a period, while we talk about moving some Blackhawks from active units, there will be a period where we have to rebuild those air frames to get them ready for redistribution to Guard units, and of course a part of our master plan is that we buy more Blackhawks than we currently have in the Army budget, and so we can use your assistance with that plan, but over time, it is the idea that we modernize the fleet, and accelerating the distribution is in our interest, I think.

COMPUTER ATTACKS

Senator LEAHY. I will put my other questions in the record, except for one. General Davis, we have an information operations unit in Vermont. I feel one real threat we face, both on the civilian side and on the military side, are computer attacks, and oftentimes we do not know where they are coming from, but we know how devastating they can be.

I think the Guard is the perfect organization to have this mission because, as you know, it has helped us in my State. We have had a number of high tech companies, International Business Machines (IBM) and others who have helped us retain some of these people. The Guard members are getting the basic Guard salary, and, more importantly, a real sense of patriotism. I am wondering if we will have a formal training apparatus to train both the Reservists and

active duty to carry out this information mission? Just think where we were 50 years ago. We would not have had to think of something like this, but today it is a major one.

General DAVIS. Well, sir, we have in both the Army Guard and the Air Guard units that we have stood up in this information operation area. In response to that, the fact that we have young people who work in civilian jobs, many of them, and they work in much higher tech areas than we have available in the United States military—as a result of that, we have been able to tap into some of those talents.

In the Army we are working with the Land Information Warfare Agency down at Fort Belvoir, and in the Air Guard we are working with the Air Force Intelligence Agency, and I would like to ask General Schultz if he would comment on the Army, what we are doing there, and General Weaver, if he could comment on the specifics of some of the things we are doing in the Air Guard.

General SCHULTZ. We have in each State developed a small team, computer emergency response teams. We have today trained 921 members within the Army Guard, Active and Reserve. A number of them have trained at one of your schools, Center of Excellence, by the way, and so what we are saying is, there is a capability—I think reinforcing your point, there is a capability inside the Guard today that clearly is perfectly suited for the risk that we might have as we rely more and more on networks and technology and so on, so we are working this initiative, and the Army has today just simply outlined our role as one of the leaders.

Senator LEAHY. Well, the President was up recently at the meeting of the hemisphere leaders held in Quebec City. I know we are very active in Burlington with the Guard in monitoring all of the various Internet sites to look out for hackers, which I find very interesting. You are going to be able to attract some of the people in the next generation, the people who really want to stay there.

Mr. Chairman, you have been more than indulgent with me in allowing me to go way beyond my time. I appreciate it. I will submit the rest for the record. I think the witnesses will find that over the years this has not been the most unfriendly committee that you come to, but I also appreciate your help, and I feel honored to be with Kit Bond on the Guard Caucus. Thank you.

Senator INOUYE. Thank you very much.

Senator Bond was unable to be here today, and asked that his statement be placed in the record.

[The statement follows:]

PREPARED STATEMENT OF SENATOR CHRISTOPHER S. BOND

Mr. Chairman: Thank you for holding today's hearing and inviting the Guard and Reserve Chiefs to testify. Those of us who work defense issues have known for some time that the increased operations tempo of our Active forces has had an equal if not greater impact on our Guard and Reserve Forces.

As co-chair of the Senate Guard Caucus and a former two-time governor who had to rely on the ability of Missouri's National Guard to respond at a moments notice to a state emergency I am extremely concerned about the current state of readiness within our Guard and Reserve forces.

No matter where we look we seem to find alarming statistics denoting a serious decline in the state of readiness of our forces. For today's hearing I could have asked a myriad number of questions dealing with a broad range of issues; from the serious backlog in Military Construction projects for all the Guard and Reserve components; to the severe shortage of full-time manning for the Guard; to the lack of adequate

basic equipment such as SINCGAR radio sets that enable our ground forces to talk with secure voice capability to one another; to the dismal state of affairs with Army Aviation Modernization; to the troubling state of our KC–135E tanker forces which are vital for supporting extended operations such as we see in the Pacific region; to the need for C–40 modernized air logistics assets for the Navy and Naval Reserve. The list goes on and on and on.

I intend to do my best to support the Administration and the Secretary of Defense as he prepares to outline the findings of his strategic assessment. It's important to note that whatever plan is developed the reliance of our Active forces on the Guard and the Reserve is at an all time high and it's inconceivable that we can continue to ask so much of our Guard and Reserve forces while at the same time we are not adequately resourcing these components to do the job they've been given. It is a sad state of affairs. We ask our citizen-Soldiers, Airmen, Marines, and Sailors to contribute in both the civilian and the military sector and when we inadequately resource them for the military missions they've been given we put them at much greater risk.

In peacetime especially it is ludicrous to put our most precious resources, the men and women who serve in both our Active and Reserve components, at undue risk but after what I've seen this is exactly what we're doing and something has to be done about it. Let me give you just one example of why I'm troubled. Colonel Michael Ledbetter, currently serves as the State of Missouri Aviation Officer. In this position he oversees all Army Guard aviation operations and training. In his words the state of Missouri's Army Guard aviation fleet is the worst he has seen in over 30 years of operation dating back to the 1968 time-frame when he served in Vietnam.

In Missouri we have almost 200 pilots tasked with performing both state and federal missions and I'm told they have five attack helicopters, five utility helicopters, and three operational observation helicopters for use, but that out of this fleet on any given day we might get a total of only 7 aircraft up for flight. The condition of our fleet has been plagued with flight groundings and safety of use messages limiting operations for the past 24 months. With every safety of use message comes a set of inspections and more aircraft failing those inspections. The bottom line is we're working with an outmoded and aging fleet and the prospects for replacement aircraft are grim. This situation not only impacts readiness but safety as well. This is not satisfactory.

Mr. Chairman, this is just an example of the declining state of readiness of our Guard and Reserve forces. Our men and women deserve better and I'm going to do all I can to ensure they're given adequate resources to do their job.

I want to thank the Guard and Reserve Chiefs for testifying today. Please extend to the men and women you serve with my most heartfelt thanks for their devotion to duty. You have my utmost respect and admiration.

Senator INOUYE. Gentlemen, as you know, three subcommittees are presently meeting, and as a result we have had several requests from Members wishing to submit questions, so you will be receiving questions from us for your response.

We have a problem before us. The best information advises us that DOD will be submitting their supplemental request about the end of this month, hopefully, and the strategic review should end sometime in June. It may take 30 to 45 days to come up with numbers, and if that is the case, we will be receiving the budget request at the end of July. In August we are in recess. In September, we have to act on the budget.

My concern is that in that mad rush the Reserves and the Guard may be left out. Therefore, I believe I speak for this committee. Will you please provide us first your wish list for what is necessary to make you compatible? Of course, all the services are now going through this transformation, or modernization program, and if you are going to serving us the way you have, then you have to have compatible equipment and communications.

Second, and most importantly on the supplemental, obviously you have a shortfall not just in personnel, but because of the fre-

quent contingency deployments, you are bound to have shortfalls in other areas.

We would like to have that in our hands if we can at the earliest, because otherwise you are going to be caught in the mesh of all the other supplemental requests. If you have other matters you would like to bring to our attention, please take advantage of us, otherwise you are going to be lost.

[The information follows:]

EQUIPMENT AND COMMUNICATION

Please see attached.

ANG FISCAL YEAR 2002 AIRCRAFT MODERNIZATION REQUIREMENTS

	Aircraft Modernization Requirements	Units in Fiscal Year 2002/Total Required	Fiscal Year 2002 Requirement	Fiscal Year 2002 Total	Contractor	States Affected by Procurement
A–10 PE #27131	A–10 Re-Engine	Prgm Start Funds	$8,000,000		TBD—G.E.; P&W; RR	CT, ID, MA, MD, MI, PA
	A–10 Precision Engagement Program	Prgm Start Funds	17,000,000		Lockheed Martin, Owego, NY.	
	A–10 ALR 69 Antenna Optimization	51 of 102 reqd	1,650,000		Marconi USA, Lansdale, NY.	
	A–10 Helmet Mounted Cueing System (HMCS)	Prgm Start Funds	5,000,000		Vision Systems Intl, San Jose, CA.	
				$31,650,000		
B–1 PE #51628	B–1B Beyond Line of Sight (BLOS) Data Link	9 of 18 reqd	22,500,000		Boeing, St. Louis, MO	GA, KS
	B–1 Defensive Systems Upgrades	18 of 18 reqd	6,600,000		Boeing/Raytheon, St. Louis, MO.	
	B–1B AVTR (Airborne Video Tape Recorder)	18 of 18 reqd	2,000,000		Boeing/L3 Comm, St. Louis, MO.	
				31,100,000		
C–130 PE #54332	C–130 Armor	168 of 168 reqd	25,200,000		LAST Armor, Waltham, MA	AK, AR, CA, DE, HI, ID, IL, IN, MD, MI, MO, NC, NV, NY, OH, OK, PA, PR, RI, TN, WV, WY
	C–130H2 APN–241 Radar	101 of 101 reqd	54,500,000		Northrop Grumman, Linthicum, MD	
	C–130H2 NVIS (Night Vision Imaging System) Lighting.	104 of 104 reqd	13,500,000		EER Systems, Chantilly, VA	
	C–130 Situational Awareness Data Link—SADL	wire 220/equip 110	6,000,000		Raytheon, Fullerton, CA.	
	EC–130J Wideband Satellite Connectivity (WSC) System.	6 of 6 reqd	6,000,000		Boeing, Seattle, WA	PA
				105,200,000		
F–15 PE #27130	F–15 AIFF (Advanced Identity Friend/Foe)	126 of 126 reqd	25,160,000		TBD—BAE; Raytheon; Litton	OR, FL, LA, MA, MO, HI
	F–15 Aircraft Video Recording System (AVRS)	126 of 126 reqd	5,800,000		Vision Systems Intl, San Jose, CA.	
	F–15 Tactical Electronic Warfare Systems (TEWS)—3600 RDT&E.	Prgm Start Funds	14,500,000		TBD—Orbital; L3 Comm; Litton; TEAC.	
				45,460,000		
F–16 (Blk 25/30) PE #27133.	Targeting Pods	26 of 81 reqd	40,000,000		Northrop-Grumman, Rolling Meadows, IL.	AL, AR, AZ, CA, CO, IA, IL, IN, MD, MI, MN, MT ND, NJ, NY, OH, SD, TX, VA, VT, WA

ANG FISCAL YEAR 2002 AIRCRAFT MODERNIZATION REQUIREMENTS—Continued

	Aircraft Modernization Requirements	Units in Fiscal Year 2002/Total Required	Fiscal Year 2002 Requirement	Fiscal Year 2002 Total	Contractor	States Affected by Procurement
	F–16 Color Displays	202 of 365 reqd	25,000,000		Honeywell, Albuquerque, NM	
	F–16 Advanced Central Interface Unit—ACIU	213 of 365 reqd	8,000,000		EFW, Ft Worth, TX	
	F–16 Heads Up Display Electronics Unit—HUD EU	214 of 365 reqd	12,000,000		BAE Systems, Ft. Worth, TX.	
	F–16 ALR–69 Antenna Optimization	180 of 180 reqd	8,300,000		Lockheed Martin, Ft. Worth, TX.	
	F–16 Pylon Integrated Dispenser System (PIDS) Universal.	81 of 342 reqd	5,000,000		Lockheed Martin/Terma Elektroniks, Ft. Worth, TX.	
	F–16 Helmet Mounted Cueing System (HMCS)	Prgm Start Funds	5,000,000		Vision Systems Intl, San Jose, CA.	
	F–16 AIFF (Advanced Identify Friend/Foe)	Prgm Start Funds	2,500,000		BAE Systems, Greenlawn, NY.	
				105,800,000		
F–16 Blk 42 PE #27133	F–16 Block 42 Re-Engine	23 of 49 reqd	98,000,000		Pratt & Whitney, West Palm Beach, FL.	IA, OH, OK
				98,000,000		
HH–60–1 PE #53114	HH–60G ALR–69	20 of 20 reqd	10,000,000		WR–ALC, Robins , GA	AK, CA, NY
	HH–60 Situational Awareness Data Link—SADL	18 of 18 reqd	900,000		Raytheon, Fullerton, CA.	
				10,900,000		
KC–135 PE #41218	KC–135E to R Conversions	16 of 88 reqd	352,000,000		Boeing & G.E., Wichita, KS	AZ, CA, IL, KS, ME, MI, NJ, PA, TN, UT, WA
	KC–135 Situation Awareness Data Link—SADL	wire 224/equip 112	6,100,000		Raytheon, Fullerton, CA	NY, OH, PA, TN, UT, WA, WI
				358,100,000		
SAOC PE #64754	Joint Tactical Information Distribution System (JTIDS)	5 of 5 reqd	2,500,000		BAE Systems/Rockwell, Cedar Rapids, IA.	FL, NY, WA, HI, PR
				2,500,000		

NEW ACQUISITIONS

Aircraft Modernization Requirements		Units Required	Unit Cost	Program Cost	Contractor	States Affected by Procurement
C–17	Replaces aging/retiring C–141s	TBD	$184,000,000	TBD	Boeing, Long Beach, CA	AK, CA, MS, HI
F–16C	Equips the AF with new jets; ANG gets trickle-down	18	31,444,000	$565,992,000	TBD	SC, plus 2 states TBD
C–40C	Supports Congressional, DOD, Air Force missions	3	69,000,000	207,000,000	Boeing, Seattle, WA	DC
C–130J	Completes conversion of 143AW, RI and 146th AW, CA	15	70,000,000	1,050,000,000	Lockheed Martin, Marietta, GA	CA, RI
EC–130J	Completes conversion of 193rd SOW, Harrisburg, PA	3	93,000,000	279,000,000	Lockheed Martin, Marietta, GA	PA
C–37 Aircraft	Supports Congressional, DOD, USAF missions	2	46,000,000	92,000,000	Gulfstream Aerospace, Savannah, GA	DC

FISCAL YEAR 2000 UNFUNDED REQUIREMENTS LIST

NEW ACQUISITIONS	Units Required	Unit Cost	Program Cost	Ttl New Acquisition Cost	AF POM	APOM Fiscal Year 2001	ANG Critical List
F–16	TBD	$27,000,000	TBD	.....	Yes	No	No
C–130J–30 Stretch	5	58,400,000	$292,000,000	.....	Yes	No	No
EC–130J	2	90,000,000	180,000,000	.....	Yes	No	No
C–22 Replacement	3	56,500,000	169,500,000	.....	No	No	No
C–38 A/C 3&4	2	15,000,000	30,000,000	$671,500,000	No	No	No

FISCAL YEAR 2000 UNFUNDED REQUIREMENTS

SUSTAINMENT & SUPPORTABILITY ITEMS	Units Required	Unit Cost	Program Cost	Ttl Support & Sustain Cost	AF POM	APOM Fiscal Year 2001	ANG Critical List
Mobile Air Fire Fighting System (MAFFS)	5	$2,000,000	$10,000,000	.....	No	No	No
C–141 8.33 MHZ Radios	6	200,000	1,200,000	.....	No	No	Yes
HC–130 Floor Armor	6	125,000	750,000	.....	No	No	No
C–130 Floor Armor	12	110,000	1,320,000	.....	No	No	No
LC–130 Upgrade	4	1,250,000	5,000,000	.....	No	No	No
Tactical Air Control Party (TACP)/ Air Support Ops Squadron	15	552,000	8,280,000	$472,050,000	Yes	Yes	No

Upgrades F–100PW–100 Engine Cores to –220E. Completes F–16s (27; completes F–15 A/B (270 with spares. This program improves performance, reliability, and corrects the #1 safety issue in F–16's.

The following is the Air Force Reserve Command's list of unfunded miscellaneous operational equipment for fiscal year 2002 (as of: 24 May 2001).

AIR FORCE RESERVE COMMAND (AFRC) FISCAL YEAR 2002 EQUIPMENT REQUIREMENTS LIST

[Dollars in millions]

Priority No.	Requirements	Total Required Qty/Cost	Fiscal year 2002 Req'd Qty/Cost	Remaining Qty Req'd	Remaining Cost	Unit Cost
1	C–141 Life Extension/Replacement	45 ac/932	None	45 ac	$932	$20.711
2	C–130 Js	4 ac/$290.8	2 ac/$145.4	2 ac	145.4	72.7
3	KC–135 R Engine Kits	16 kits/$432	2 kits/$54	14 kits	378	27
4	F–16 D Model SADL Installation	10 kits/$0.3	5 kits/$0.15	5 kits	0.150	0.03
5	F–16 Color Displays	72 units/$15	23 units/$4.8	49 units	10.2	0.208
6	Tactical Radios (SCOPE SHIELD II)	82 sets/$8.5	41 sets/$4.25	41 sets	4.25	0.104
7	F–16 Helmet Mounted Cueing System (HMCS)	80 sets/$20.6	None	80 sets	20.6	0.258
8	Survival Radios (PRC 112, GPS-Capable)	30 units/$0.6	30 units/$0.6	None	(1)	0.02
9	F–16 Pylon Integr Dispens Sys Universal Upgrade	50 mods/$3.0	50 mods/$3.0	None	(1)	0.06
10	B–52 Bomber Enhanced Tactical Interface	8 sets/$2.0	None	8 sets	2.0	0.25
11	KC–135 Auxiliary Power Unit Boost Pump	16 units/$0.32	16 units/$0.32	None	(1)	0.02
12	HH–60/C–130/KC–135 Carry-on SADL	67 kits/$3.685	None	67 kits	3.685	0.055
13	C–130 Spray Paint Booth	1 booth/$0.565	1 booth/$0.565	None	(1)	0.565
14	Motor Vehicles For Med UTC's (Multi-Yr)	44 veh/$2.42	34 Veh/$1.87	10 veh	0.550	0.055
15	Snow Removal Vehicles	7 veh/$1.2	7 veh/$1.2	None	(1)	0.171
16	Land Mobile Radios (Multi-Yr)	10.5 bases/$7.83	5.5 bases/$4.08	5 bases	3.75	0.746
17	Intrusion Detection System (Multi-Yr)	10 bases/$4.125	5 bases/$2.063	5 bases	2.063	0.413
18	Hydrant Fueling Trucks	9 trucks/$1.4	9 trucks/$1.4	None	(1)	0.156
19	Next Generation Nvg's	100 sets/$1.5	None	100 sets	1.5	0.015
20	Truck Tractors	10 trucks/$0.770	10 trucks/$0.77	None	(1)	0.077
21	Utility Truck (4×4)	5 trucks/$0.152	5 trucks/$0.152	None	(1)	0.03
22	Flightline Video Surveillance System	6 systems/$1.01	3 systems/$0.505	3 systems	0.505	0.168
23	F–16 Advanced Central Interface Unit—Upgrades	72 kits/$6.6	72 kits/$6.6	None	(1)	0.092
24	C–5A Re-Engine Kits	32 kits/$1,176	None	32 kits	1,176	36.75

Total Cost Required: $2,912.4 million.
Total Cost Required for Fiscal Year 2002: $231.8 million.

AFRC UNFUNDED MISCELLANEOUS EQUIPMENT LIST (FISCAL YEAR 2002)

Priority #1

Description.—Currently the AFRC C–141 fleet is due for retirement in fiscal year 2006. Because of this, many operational deficiencies are not being addressed. Upgrades such as the 8.33 kHz radios are required to meet DOD's mandated Global Air Navigation System/Global Air Traffic Management requirements. The issue becomes how can the AFRC C–141 fleet continue to support strategic lift requirements globally. The AF has to address the issue of either extending the life for C–141 or provide an alternative replacement mission.

Impact to Readiness.—Currently there is no follow-on mission planned for AFRC C–141 fleet. AFRC will not be able to fully meet its role in the AEF concept.

State/Base.—Ohio, Wright-Patterson AFB; Maryland, Andrews AFB; California, March ARB.

Priority #2

Description.—Procures 4 additional C–130J's to complete the conversion of the 403rd Airlift Wing at Keesler AFB, MS. In order for the unit to be operational it needs a total of 8 aircraft. The 403rd currently has 4 aircraft on the ramp and needs 4 more to complete. AFRC originally had the additional 4 C–130J's supported by the AF however the AMC road map is presently being updated and may move aircraft further into the future.

Impact to Readiness.—The lack of assets will translate to inadequate training and ineffective operational capability.

State/Base.—Mississippi, Keesler AFB.

Priority #3

Description.—Replaces all "E" model engines with "R" model engines; provides larger flight control surfaces, improved landing gear and brakes. Includes kits and installation. Total AFRC requirement is 16 kits for 16 aircraft at approximately $27 million each kit.

Impact to Readiness.—Current "E" model engines are old, are limited because noise abatement fines. They are more expensive to operate and do not offer fleet commonality for theater or AEF deployment.

State/Base.—Michigan, Selfridge ANGB; California, Beal AFB.

Priority #4

Description.—Provides the internal wiring and data link radios for use by F–16 D aircraft, the training version, for battlefield situational awareness. Recent real-world and peacetime incidents of fratricide have proven the need for a battlefield identification system. SADL will provide the AFRC F–16 fleet with a capability to work with other USAF units as well as U.S. Army units in close combat while minimizing the potential for fratricide. This will tie into the Army's Digital Battlefield.

Impact to Readiness.—Increased situational awareness increases both mission continuity and survivability while reducing incidents of fratricide during real-time operations and brings a true combined arms capability to the combat arena.

State/Base.—Texas, Carswell Ft. Worth; Utah, Hill AFB; Florida, Homestead ARS; Arizona, Luke AFB.

Priority #5

Description.—Current AF Reserve F–16 Block-30 aircraft use monochrome (black and white) displays. Hi-definition color Multi-Function Displays will enable the F–16 to capture more precise, informative pictures thus improving interpretation, advancing situational awareness, and increasing visual accuracy for target recognition with electro-optical weapons and targeting systems.

Impact to Readiness.—Existing F–16 Block 30's displays are black and white, old, and spare parts are unsupportable. Current displays will not be able to handle planned/future upgrades to the aircraft.

Other.—ACC has determined the displays to be a Critical Viability Issue and unfunded program for ARC (AFRC/ANG) aircraft. AF Form 1067 (Modification Proposal) has been approved by ACC. At present, the ARC is working a "fair-share" upgrade study which leverages a greater number of aircraft to obtain lower prices for this upgrade (contractor not yet determined).

State/Base.—Texas, Carswell Ft. Worth; Utah, Hill AFB; Florida, Homestead ARS; Arizona, Luke AFB.

Priority #6

Description.—This will replace the older and unsupportable Scope Shield I (SSI) tactical field radio sets for all AFRC Force Protection units. Scope Shield II (SSII)

radios have proven capability of providing adequate and necessary secured communication links during training exercises and contingency operations.

Impact to Readiness.—With the exception of a very limited number of units, the AF reserve force structure retains the old, out-dated, ineffective equipment, and non-interoperable radios.

Other.—Headquarters Air Force Civil Engineer Support Agency (AFCESA) identified Scope Shield II tactical radio equipment as the replacement for the antiquated Scope Shield I tactical radio sets within all CE units. Because of the cost for outfitting all CE units a decision was made to only fund acquisition for active duty CE Unit Type Codes (UTCs). Sufficient POM funding is not available for Air Force Reserve and Air National Guard units. Operational Requirements Document 99–27.

State/Base.—Massachusetts, Westover ARB; Oregon, Portland IAP; Georgia, Dobbins AFB, Robins AFB; Wisconsin, Gen Mitchell IAP; Texas, Carswell Ft. Worth ARB, Kelly AFB; Florida, Homestead AFB, Eglin AFB, Patrick AFB; California, March AFB; Indiana, Grissom ARB; Minnesota, Minn-St. Paul ARS.

Priority #7

Description.—A Helmet Mounted Cueing System (HMCS) will provide the F–16 pilots an integrated capability with the combining of data from the multi-functional displays, instrumentation, and other on-board avionics. It will significantly improve Air to Air and Air to Ground mission effectiveness by providing Heads Up Display (HUD) information and spatial cueing directly onto an aircrew helmet visor.

Impact to Readiness.—HMCS is leading-edge technology and a necessity for threat awareness and defensive reactions. It maintains parity with the active duty fighter force.

Other.—The HMCS is not fully operational. Final testing is expected in fiscal year 2002.

State/Base.—Texas, Carswell Ft. Worth; Utah, Hill AFB; Florida, Homestead ARS; Arizona, Luke AFB.

Priority #8

Description.—This requirement is for a training package of 30 PRC–112B/C survival radios for 10th Air Force fighter, rescue and special operations units. The PRC–112B (sometimes referred to as the Hook 112) has become the standard survival radio in Operations Northern and Southern Watch (ONW and OSW). These radios offer a great increase in capability over PRC–90 and early PRC–112 radios. Among the capability of these radios is an internal Global Positioning System (GPS) receiver and the ability to communicate with rescue forces via secure data burst transmission. These radios will be evenly distributed among AFRC fighter bases.

Impact to Readiness.—Rescue is all about identifying and retrieving personnel. It is crucial to locate, identify, and recover during the "golden hour", that first hour a survivor is on the ground and when the member is most susceptible to capture. With this SR, golden-hour search and rescue is now reachable.

State/Base.—Hill AFB, Utah; Homestead AFB, FL, Carswell Ft. Worth, TX; Luke AFB, AZ; Whiteman AFB, MO; Barksdale AFB, LA; New Orleans ARB, LA.

Priority #9

Description.—PIDS universal upgrade is a modification to the PIDS that allows the aircraft to be in compliance with Military Standard 1760 for electronics bus. MIL STD 1760 interface is necessary to support "Smart Weapons" integration. The term "Smart Weapons" is used to describe a range of weapons that use the Global Positioning System (GPS) for trajectory guidance.

Impact to Readiness.—This requirement is a necessity for participation and deployment with Aerospace Expeditionary Forces. This will be a future qualifier and is an ACC unfunded survivability issue.

State/Base.—Texas, Carswell Ft. Worth; Utah, Hill AFB; Florida, Homestead ARS; Arizona, Luke AFB.

Priority #10

Description.—Provides moving map capability and Real Time Information in the Cockpit (RTIC) to all crew stations on the B–52. The BETI system consists of personal computer (PC) based, computer display screens, one mounted at each aircrew station ((Aircraft Commander (AC), Pilot, Navigator (Nav), Radar Nav (RN), and Electronic Warfare Officer (EWO)).

Impact to Readiness.—The BETI system will provide the B–52 aircrew with enhanced tactical awareness via moving map displays, near Real Time Intelligence in the Cockpit (RTIC) threat updates and displays, and Line of Sight (LOS) and Beyond LOS (BLOS) data transfer capability. This program is presently under develop-

ment at ACC and may appear as an fiscal year 2004 POM initiative for active aircraft.

State/Base.—Louisiana, Barksdale AFB.

Priority #11

Description.—Replaces un-supportable boost pump on the KC–135E model tankers with same boost pump used on the KC–135R's. The E-model fuel boost pump impeller fails, leaks internally and is not designed for continuous operation. The modification includes pump, brackets, wiring, trial install, kit-proofing, support, and technical order updates/engineering changes. This is a Guard/Reserve effort.

Impact to Readiness.—Improves mission readiness rate at a lower maintenance cost. It will also bring commonality to the entire KC–135 fleet.

State/Base.—Michigan, Selfridge ANGB; California, Beal AFB.

Priority #12

Description.—Current operations across the spectrum of operations have proven the need for a battlefield identification system. The Situation Awareness Data Link (SADL) will provide the AFRC tactical airlift (C–130, KC–135 aircraft and HH–60G helicopter) and Combat Search and Rescue (CSAR) aircraft with a capability to work with other USAF units as well as similarly equipped Army and Marine units in close-in Joint combat scenarios. It provides tactical data link capability as a carry-on PC-based system. This modification concept will link SADL data directly to aircraft navigator table (where applicable). It will provide air-to-ground interface for airdrop or personnel recovery coordination en-route. Provides air-to-air tactical picture and escort situation to aircrew.

Impact to Readiness.—Incorporation of SADL into AFRC aircraft will reduce the possibility of other aircraft or ground units shooting down a SADL equipped aircraft. This also enhances mission survivability due to the ability to pass "live" information between aircraft.

State/Base.—Michigan, Selfridge ANGB; California, Beal AFB; Florida, Patrick AFB.

Priority #13

Description.—Procures Environmental Protection Agency (EPA) compliant paint spray booth for the 403 AW and replaces the out-dated aircraft spray booth. The new booth will serve both WC and C–130H/J aircraft. This is a side-down draft, pressurized, dry filter aircraft parts/support equipment paint spray booth insert.

Impact to Readiness.—The coating system must provide the specified survivability enhancement for the life of the airframe. As the flat camouflage coatings used on our weapon systems age they loose their hiding and corrosion prevention capability. Another major concern is meeting environmental standards. The present system may fail to meet several EPA clean air regulations making the AFR liable to fines that can exceed the cost of replacing the booth.

State/Base.—Louisiana/Keesler AFB.

Priority #14

Description.—The High Mobility Multipurpose Vehicles are DOD standard light personnel transport/carrier (also known as the Humvees) M1097A2 vehicles. These are needed to replace the existing M1008 vehicles, which are no longer manufactured. The M1097A2 truck will transport equipment and personnel to the battlefield in support of medical wartime tasking. Due to DOD-wide use these vehicles are adaptable, interchanged, or shared with other agencies, components, or agencies for a wide variety of additional tasking.

Impact to Readiness.—These vehicles are essential for continued medical support operations. Current vehicles are prone to breakdown and maintenance time has doubled due to lack of parts.

State/Base.—Florida, MacDill AFB.

Priority #15

Description.—Snow plow and removal vehicles are needed at northern tier AFRC bases. The lack of these vehicles have reduced the base Civil Engineering squadron ability to perform runway and taxi way snow removal and cleanup effectively and timely. The full compliment of the necessary snow vehicles will improve aircraft launch and recovery operations during winter months.

Impact to Readiness.—At northern bases where snow accumulation has reached 2 to 3 feet within hours, runways are shutdown if the snow is not properly and completely removed and operational support/training is delayed.

State/Base.—Washington, McChord AFB; Oregon, Portland IAP; Minnesota, Minn-St. Paul ARS; Wisconsin, Gen. Mitchell IAP ARS; Michigan, Selfridge ANGB; New York, Niagara Falls IAP ARS.

Priority #16

Description.—This requirement consists of the procurement and installation of trunked LMR Systems at all AF Reserve Bases (.5 or half systems are used to address AFRC tenant base structure). Currently, operating radio networks in six AFRC bases are experiencing problems including lack of coverage, degraded service, and limited frequencies, trunked LMRs provide an integrated system that complies with National Telecommunications and Information Administration (NTIA) regulation for narrow band operations.

Impact to Readiness.—Many AFRC bases are experiencing problems such as, degraded signal, transmission drop-offs, and frequency limitation. Effective 1 Jan 2005, NTIA requires all LMR networks to go to narrow-band, thus driving an upgrade of all LMR equipment and infrastructure.

State/Base.—Massachusetts, Westover ARB [1]; Oregon, Portland IAP; Georgia, Dobbins AFB [1]; Wisconsin, Gen Mitchell IAP [1]; Texas, Carswell Ft. Worth ARB; Florida, Homestead AFB [1]; California, March AFB [1]; Indiana, Grissom ARB [1]; Minnesota, Minn-St. Paul ARS.

Priority #17

Description.—This is a highly reliable integrated security system capable of intrusion detection, alarm reporting, and situation assessment. It integrates sensors, data communication devices, and power supplies into a relocatable (movable) system designed to enhance flight line security.

Impact to Readiness.—Due to AFRC's installations being minimally manned for security, the use of this system is important to Force Protection efforts, and is a significant force multiplier.

State/Base.—Minnesota, Minn-St. Paul ARS [1]; Texas, Carswell ARS [1]; Louisiana, New Orleans ARS [1]; Massachusetts, Westover ARB [1]; Wisconsin, Gen Mitchell ARS [1]; Ohio, Youngstown-Warren ARS; New York, Niagara-Falls IAP, ARS; California, March ARB; Florida, Homestead ARS; Georgia, Dobbins ARB.

Priority #18

Description.—These vehicles are required to transfer aircraft fuel directly from an under ground hydrant system onto KC–135 and C–5 aircraft. Mission readiness at AFRC bases assigned KC–135 and C–5 aircraft depends on the operation of hydrant trucks. The pumping capability of the hydrant is 1,200 gallons per minute where as the existing R11 pumps only 600 gallons per minute. The funding level of new procurement through the vehicle priority buy system has been consistently under funded.

Impact to Readiness.—Without the double capacity hydrant trucks AFRC fuels management effort is doubled when servicing KC–135, and C–5 aircraft or servicing transient wide body aircraft.

State/Base.—California, March ARB; Minnesota, Minn-St. Paul ARS; Ohio, Youngstown-Warren ARS; New York, Niagara-Falls IAP, ARS; Massachusetts, Westover ARB; Florida, Homestead ARS; Texas, Carswell ARS; Louisiana, New Orleans ARS; Georgia, Dobbins ARB.

Priority #19

Description.—These NVGs are a major leap in NVG technology, and offer significant capability, and safety increases over presently fielded NVGs. This purchase will provide enough NVGs to allow all applicable AFRC units to train and develop tactics to this increased capability. This quantity will also be enough to equip and deploy 2 AFRC units. This purchase offers a cost-effective compromise as opposed to replacing all NVGs presently being used. This will allow future incremental buys taking advantage of product improvement and refinement after initial production. Panoramics offer a wider field of view than current NVGs, and low bloom technology offers a significant increase in capability in urban areas, a DOD high priority environment. Non ejection compatibly, limited field of view and NVG blooming are currently the 3 most severely limiting factors in NVG operations. These NVGs will be used in special operations, rescue and fighter units.

State/Base.—Hill AFB, Utah; Homestead AFB, FL; Carswell Ft. Worth, TX; Luke AFB, AZ; Whiteman AFB, MO; Barksdale AFB, LA; New Orleans ARB, LA.

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[1] Indicates desired fiscal year 2002 installation.

Priority #20

Description.—Tractors are required to transport recovered cargo loads after airdrop support operations. These tractors are considered multipurpose and can be used in a wide variety of scenarios while providing the necessary capability for which they are intended.

Impact to Readiness.—Increased AFRC taskings around the world demand more assets to be available for support.

State/Base.—California, March ARB; Minnesota, Minn-St. Paul ARS; Ohio, Youngstown-Warren ARS; New York, Niagara-Falls IAP, ARS; Massachusetts, Westover ARB; Florida, Homestead ARS; Texas, Carswell ARS; Louisiana, New Orleans ARS; Georgia, Dobbins ARB; Pennsylvania, Pittsburgh IAP ARS.

Priority #21

Description.—These 4×4 utility vehicles are required to transport drop zone management and cargo recovery teams to and from the drop zones. One way distance to many drop zones can exceed 100 miles. These utility vehicles have the capability to travel at any time over any land surface in and around drop zones to set up runway markers and locate recoverable airdropped loads.

Impact to Readiness.—Fewer airdrops are performed per flying training mission because of the amount of time it takes to recover airdrop training loads.

State/Base.—Minnesota, Minn-St. Paul ARS; Ohio, Youngstown-Warren ARS; New York, Niagara-Falls IAP, ARS; Massachusetts, Westover ARB; Pennsylvania, Pittsburgh IAP ARS.

Priority #22

Description.—The Flightline VSS is part of the AFRC Flightline Threat Reduction Program. AFRC installations are minimally manned due to shortage in manning. Manpower authorizations at each location allow for only 1 one-person mobile patrol per control point. The Flightline VSS acts as a force multiplier without additional manpower. Additionally the Flightline VSS allows commanders to observe maintenance operations in progress and security situations, in near real-time, via command post remote monitors.

Impact to Readiness.—The expanding role of AFRC in the total force makes it imperative that strong emphasis be placed on security of priority resources while adding a greater margin on safety.

State/Base.—Wisconsin, Gen Mitchell ARS [1]; Minnesota, Minn-St. Paul ARS [1]; Texas, Carswell ARS [1]; Massachusetts, Westover ARB; Ohio, Youngstown-Warren ARS; California, March ARB.

Priority #23

Description.—The ACIU provides weapons interface, communication and data processing for the Block 25/30/32 F–16. Capabilities of the existing ACIU cannot accommodate the integration of new generation "Smart Weapons" and prevent the full potential of the aircraft. Future capabilities planned for integration on the F–16 will be limited or impossible under constraints imposed by the current ACIU. The total cost of the program is $6.65 million. This includes $4 million for Non-recurring engineering (NRE). The total quantity required is 72 units.

Impact to Readiness.—Existing ACIU processor speed and memory capacity cannot handle any additional capabilities. In addition, its failure rate is very high, Mean Time Between Failure (MTBF) is 400 hours. The upgraded device is anticipated to have a 2,000 hour MTBF.

State/Base.—Texas, Carswell Ft. Worth; Utah, Hill AFB; Florida, Homestead ARS; Arizona, Luke AFB.

Priority #24

Description.—The RERP program is required to replace the current T–39 engine and upgrades airframe and systems components. This is a much needed modernization requirement for the C–5A, whose age is well above 30 years old. This effort will improve the C–5A reliability and maintainability by focusing on replacing the less reliable T–39 engine with a more reliable, commercial-off-the-shelf, turbo fan engine. This program also will upgrade numerous other subsystems including flight controls, electrical, hydraulics, landing gear, fuel system, and airframes.

Impact to Readiness.—This mod will significantly improve readiness and increase operational worthiness times while, reducing down time for maintenance and personnel cost.

State/Base.—Massachusetts, Westover ARB; Texas, Lackland AFB.

DEPLOYMENTS

ANG fiscal year 2001 supplemental requirements

[In millions of dollars]

ANG Family Program. Implemented in fiscal year 2001, this funding breathes life into a totally ignored piece of the ANG's worldwide commitment. While active Air Force and Air Force Reserve programs reflect $60–$125 per person for family support during contingency deployments, the ANG's family program operated on a volunteer basis	5.0
Flying Hour Program Increased Cost. Fully funds anticipated flying hour program for fiscal year 2001. Increases caused by aging aircraft and hard-to-get parts. Without additional funding, ANG aircraft will be grounded on/about 1 Sep	93.0
Utility Cost Increases. West cost utility cost increases plus inordinately harsh winter elsewhere has driven utility costs skyward. Additional funding required to offset increased costs	16.3
Civilian Payroll. Part 1 is Special Salary Rates for technician pilots and Information Technology personnel. Part 2 is to restore 25 percent program reduction for failed PMEL out-sourcing effort. Eighty-three technicians were marked for out-sourcing. Decision reversed. Fiscal year 2001 impact only	6.0
Depot Maintenance Activity Group (DMAG) Surcharge. Fiscal year 2000 shortfall in working capital fund requires surcharge in fiscal year 2001 to balance accounts. ANG share is $10.0	10.0
Depot Purchased Equipment Maintenance Backlog. ANG's current backlog includes one C–5 aircraft, two KC–135 aircraft and eight engines. All of this backlog could be executed if funding was available	18.6
Real Property Maintenance. The ANG backlog on facility maintenance now approaches $1 billion. At this point in the fiscal year, executing much more than $50 million will be a difficult task. This amount of additional funding should also maintain the current backlog	50.2
Total	199.9

The Air Force Reserve has been presented with numerous funding challenges due to high tempo of operations. Following are some of the shortfalls we are currently experiencing:

	Amount		
DPEM [1]	$39.0	O&M	Total validated requirement for AFR DPEM in fiscal year 2002 is $354.1 million. Current funding—$287.16 million, equates to 83.3 percent of validated requirement 92–94 percent of requirement is historic level of funding required. Additional $39 million would bring AFRC funding up to 92 percent. Will have to defer PDM on up to 10 aircraft of various types and delay induction of as many as 20 engines into depot overhaul
IADT, Proj 725	4.0	RPA	Initial Duty for Training activity. Allows accession of additional 400 NPS individuals. Major Reserve initiative to regain end strength. Programmed funding of $13.8 million
Annual Tour, Proj 721	8.0	RPA	Unit annual tour funding. Increased participation and costs that exceed planning factors drive this bill. Programmed funding of $484.6 million
Annual Tour, Proj 722	6.0	RPA	Individual Mobilization Augmentee annual tour funding. Increased participation and costs that exceed planning factors drive this bill. Programmed funding of $92.8 million
Bonus Incentives Programs, Project 739.	31.0	RPA	Funds needed for further incentives to support recruitment and retention. Most AFR bonus programs currently funded at less than 100 percent
Facility Projects [2]	97.0	O&M	Represents 2 percent of Plant Replacement Value of AFR facilities. Requirement is direct result of years of under funding. MILCON, and Reserve assumption of ownership of former AD bases. Attempts to halt slide in readiness. Funds critical infrastructure and facility requirements at tenant and host locations
Planning & Design	10.0	O&M	Requirement is driven by (1) limited in-house staff, (2) Increased design requirements

	Amount		
Recruiting & Advertising	21.6	O&M	Past congressional adds have allowed the program to operate at a $12 million funding level. This fiscal year's budget is closer to the original baseline of $6 million. A viable national presence and program cannot be maintained at the current level of funding. Funds national television, radio and print advertising to support 35 main operating locations, Internet advertising campaign, and new leased offices scheduled to open this fiscal year
KC–135 R Engine Kits	54.0	Investment ..	Requirement driven by proposed weapon system conversion and Congressional attention. Funds the conversion of two E-model aircraft to R-model configuration

[1] Represents 92 percent of total requirement.
[2] Represents 2 percent of Plant Replacement Value.

[In millions]

	Amount
RESERVE PERSONNEL APPROPRIATION—APPN 3700:	
Annual Tour, Proj 721	$8.0
Annual Tour, Proj 722	6.0
IADT, Proj 725	4.0
Special Tour, Project 727	21.1
Bonus Incentives Programs, Project 739	31.0
ROTC, Proj 783	11.8
Total	81.9
OPERATIONS & MAINTENANCE APPROPRIATION—APPN 3740:	
DPEM [1]	39.0
Sustaining Engineering	5.0
Recruiting & Advertising	21.6
Facility Projects	97.0
Planning & Design	10.0
Information Technology	18.5
Nuclear Biological Chemical Equipment	3.9
RED HORSE	.5
DMAG Surcharge	8.0
Mass Transit Subsidy	.5
Total	204.0
MILITARY CONSTRUCTION APPROPRIATION—APPN 3730:	
Judgment Fund Payment	11.9
Fuel Cell Maintenance Facility	7.3
Consolidated Training Center	6.1
New Fire Station	7.0
Consolidated Lodging Facility	13.3
Services Complex	12.2
Squadron Operations Facility	4.2
Aerial Port Training Facility	1.9
Consolidated Lodging Facility	15.4
Airfield Project	15.0
Fitness Center	2.5
Construct VQ to Replace VAQ	9.0
Maintenance Hangar	9.2
Planning & Design	6.7
Total	121.9
INVESTMENT APPROPRIATIONS—APPNs 3010, 3080:	
C–130Js	145.4
KC–135 R Engine Kits	54.0
F–16 D Model SADL Installation	.2
F–16 Color Display	4.8
Tactical Radios	4.3
Survival Radios	.6
F–16 Pylon Integrated Dispenser Upgrade	3.0

	Amount
KC–135 Auxiliary Power Unit Boost Pump	.3
C–130 Spray Paint Booth	.6
Motor Vehicles for Med UTCs	1.9
Snow Removal Vehicles	1.2
Land Mobile Radios	4.1
Intrusion Detection System	2.1
Hydrant Fueling Trucks	1.4
Truck Tractors	.8
Utility Truck (4×4)	.2
Flightline Video Surveillance System	.5
F–16 Advanced Central Interface Upgrades	6.6
Total [1]	232.0

[1] Total different from sum due to rounding.

RESERVE AFFAIRS

Personnel.—There are no current personnel shortfalls.

Operations and Maintenance Shortfalls.—The Marine Corps Reserve has shortfalls in O&MMCR for utilities, equipment and vehicle maintenance, and flight hours (O&MNR).

Utilities: $2.3 million

Utility costs have risen by an unprojected 40 percent at all of the 185 MARFORRES sites during fiscal year 2001, leaving MARFORRES critically short of funding. These are "must pay" costs. Meeting the "must pay" requirements from within existing appropriations will impact Real Property Maintenance and Operating Forces funding. Replenishment, replacement, and maintenance of some equipment would have to be deferred to future years, creating a bow wave in these accounts.

Maint of Equipment: $5.0 million

Repair costs for maintenance of armored vehicles, trucks, howitzers, and other ground equipment are rising. Maintenance of Equipment and Vehicles includes Critical Low Density Repairables (CLD) supporting radar and communication assets; Depot Level Repairables (DLR) supporting repair parts for such equipment as tanks, trucks, AAVS, HMMWVs; and other maintenance of equipment. When CLD and DLR equipment fails, the equipment is deadlined, training is impaired and readiness impacted. The Marine Corps is also reaching or exceeding the service life of many major ground weapon systems. Additional funding for Maintenance of Aging equipment is required to cover rising repair costs for Reserve Component organic and intermediate level maintenance for tanks, AAVs, LAVs, trucks, howitzers, and other ground equipment.

Flight Hours at current cost per hour: $3.7 million

The fiscal year 2001 Flying Hour Program does not provide adequate funding to achieve the desired Primary Mission Readiness. The potential decrease in Mission Capable/Full Mission Capable rates and 6–8 month recovery time for the re-qualification of aircrews are a major readiness concern.

Equipment Shortfalls.—F/A–18A Engineering Change Proposal (ECP) 583.

5 Reserve Aircraft upgrades: $20.5 million

The primary factor driving the F/A–18A upgrade is the mitigation of the current F/A18C/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 current difference in capability between the F/A–18A and F/A–18C is significant in several areas including weapons employment, communications, and sensors. ECP–583 rectifies these deficiencies. ECP–583 provides the war fighting CINC with enhanced battlefield aircraft superiority and sustainment. ECP–583 will ensure seamless precision strike commonality between the reserve F/A–18As and the active F/A–18A/C/D USMC squadrons by providing the necessary modernization required to support the Marine Corps Total Force. Operational and logistical commonality with the F/A–18C will be a large benefit of the upgrade. Acceleration of the avionics upgrade minimizes obsolescence and multi-configuration component management, which reduces the logistics footprint, and training for pilots and maintenance. Of the 76 F/A18As 44 have been funded and contracted for retrofit. The current year Total Force shortfall is 10 aircraft upgrades at $41 million.

ADDITIONAL COMMITTEE QUESTIONS

Senator INOUYE. And General Schultz, congratulations on this posture statement for fiscal year 2002. I hope that all of my colleagues will look over this. It is good reading. Congratulations. I wish to thank all of you for appearing before the committee 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 MAJOR GENERAL THOMAS J. PLEWES

QUESTIONS SUBMITTED BY SENATOR TED STEVENS

FISCAL YEAR 2001 FUNDING

Question. Please describe in detail your fiscal year 2001 funding challenges, and the impact of those challenges on your ability to carry out your mission.

Answer. The Army Reserve is currently faced with significant statutory Reserve Personnel, Army (RPA) funding shortfalls in fiscal year 2001 for weekend drill (Inactive Duty Training) and full-time soldier requirements ($82 million).

The Inactive Duty Training (IDT) account, which pays our soldiers to drill, is currently short $52 million. IDT funding for fiscal year 2001 was based upon historical participation rates and strength levels. Successes in recruiting, retention, and drill weekend participation are in direct contrast to the model that developed the Critical Requirements. More so, the Army Reserve was funded at levels markedly lower than the Critical Requirement levels documented by the Army's and the Army Reserve's models. On 1 October 2000, our end strength was 206,892; the authorized strength was, and is 205,300. This over strength was a direct result of our support to the Army's Recruiting Goal at the end of fiscal year 2000. Current average end strength for fiscal year 2001 as of 31 May 2001 is 205,924. Of more significance, the average funded strength is only 202,736. The impact of this resource shortfall—if additional funds are not provided, then we will have to cancel part or all of the September 2001 weekend drill to preclude a violation of the Anti- Deficiency Act [31 U.S.C. 1341(a)(1)(A)]. Additionally, the Active Guard, Reserve (AGR) pay and allowance account is short $30 million. This shortfall is the result of under costing when the budget was built.

Several measures have been taken to cover a large part of the projected fiscal year 2001 shortfall—without these actions the shortfall would be much larger. First, the AGR strength has been held well below the authorized level, with most AGR accessions being delayed until the 4th quarter (a projected $9 million savings). Second, an AGR PCS policy has been implemented that lengthens time-on-station from 3–4 years, to 5 years (a projected $6 million savings). Third, a 1,200 non-prior service accession reduction has been requested and approved (a projected $6 million savings). Additionally, steps were taken to lower our assigned strength closer to our authorization.

The Army Reserve is also faced with a significant Operations and Maintenance, Army Reserve (OMAR) shortfall of $65.5 million. The impact of not receiving additional funds will be a decrease in readiness. A civilian pay shortfall of $12.5 million is the highest priority. A utility bill of $15 million is the result of increased natural gas and electricity costs. A Base Operations shortfall of $8 million is required to fund key support services. Finally, $30 million is required for critical facility repair and maintenance.

OVERUSING THE RESERVES

Question. I am concerned that we are at the fine line of over using the Reserves. While you want to be relevant, this over reliance stretches your force, and strains families and employers. How would you address this concern?

Answer. The Army Reserve has pockets of stress; however, it is far from wearing out or straining our soldiers to the breaking point. The Army Reserve mission as directed by Congress is "To provide trained units and qualified persons available for active duty in the Armed Forces, in time of war or national emergency and at such other times as the national security requires . . ." and continues to be valid. The Army Reserve is a full partner in Army operations and has never failed to meet a deployment requirement. Since the end of the Gulf War in 1991, the Army Reserve

has participated in one of the busiest phases of its history. Army Reserve soldiers have taken part in humanitarian and peacekeeping operations in Iraq, in Haiti, in Somalia, in Central America, in East Timor, in Bosnia, in Kosovo and even in our own country at Fort Dix, New Jersey, during Operation Provide Refuge. The Army Reserve is the Army's essential support force. Without the Army Reserve, the Army would have difficulty performing its worldwide missions. Thus, unlike its earlier "for emergency use only" history, today's Army Reserve is used every day. Wherever the Army is today, so is the Army Reserve. Its area of operations is global. The reason is clear: Many critical types of support units and capabilities are either exclusively or primarily in the Army Reserve. It has most of the Army's civil affairs, psychological operations, medical and transportation units.

As vital as are Army Reserve units, 1,600 units located in 1,100 Army Reserve Centers all across America, the individual men and women of the Army Reserve are even more important. These dedicated citizen-soldiers carry their civilian-acquired skills and expertise with them to meet the needs of the Army and the nation, and then return home with even greater skills and expertise to make their communities better. In short, there is no more important investment than our investment in people; it is an imperative. Our readiness, capabilities, accessibility, and recruiting and retention rates all support this role in the National Military Strategy. The Army Reserve continues to maintain its level of readiness at an all time high and is meeting its end strength, recruiting and retention goals. The Army Reserve is accessible and capable of meeting its wartime and peacetime missions and is a prudent, cost effective force. The Army Reserve provides 20 percent of the Army's warfighting capability for 6 percent of the Army budget.

FISCAL YEAR 2001 RECRUITING AND RETENTION STATUS

Question. Please address your recruiting and retention status. What challenges do you find manning your force, and what initiatives do you have in place? Is there legislative authority you need that you don't have?

Answer. The Army Reserve fiscal year 2001 end strength objective is 205,300 soldiers. To meet this objective, we established the following enlisted accession and transition goals: United States Army Recruiting Command (USAREC)—34,910; Department of the Army Personnel Command (PERSCOM)—3,188; and the Army Reserve's retention and transition assets—5,000 soldiers. Through May 31, 2001, the enlisted accession and transition accomplishment totaled 28,183—a shortfall of 265 (0.9 percent) from the year-to-date planned achievement. Goal accomplishment is as follows: USAREC—24,088; PERSCOM—2,419; and Army Reserve assets—1,676. USAREC accesses both non-prior service and prior service personnel while PERSCOM and Army Reserve assets transition soldiers from the active component and Individual Ready Reserve (IRR), respectively, to the Selected Reserve.

Since the introduction of the Commander's Retention Program at the end of fiscal year 1997, the Army Reserve has reduced enlisted attrition by nearly 7 percentage points. The enlisted Troop Program Unit attrition rate in fiscal year 2000 was 30.8 percent. In fiscal year 2001, our retention efforts bore fruit earlier this year with a 1,200 non-prior service recruit mission reduction to USAREC. However, persistent pressure from increased job market competition that is intensified by a still robust economy makes it difficult to maintain this degree of improved retention. Consequently, funding delays and projected program shortages threaten our goal of continuing to reduce attrition.

The same environmental pressures that make non-prior service recruiting and retention difficult affects prior service accessions. Since the end of the defense drawdown we have seen a corresponding decrease in the available prior service market as reflected in the IRR. This has meant greater training costs, due to the increased reliance on the non-prior service market, and an overall loss of the knowledge that comes when NCO leadership fails to transition to the Army Reserve. Consequently, the Army Reserve's future ability to recruit and retain quality soldiers will be critically dependent on increases in selected compensation and education incentives, such as the enlistment and reenlistment bonuses, Montgomery GI Bill enhancements, tuition assistance, student loan repayment programs, employer support enhancements and family support programs. Again, real growth in recruiting, retention, and training dollars will need to occur.

Additionally, the young people of today need to be made aware of the unique opportunities available in the different military components. The best way to get this message out is to advertise through the mass media. Special attention needs to be placed on the recruiting budget, especially for advertising, to meet the requirements of all service components in the next several years. Funding our critical advertising needs is imperative if we are to be honestly expected to meet our recruiting goals.

In 1999, Congress directed the Secretary of the Army to conduct a review of the manner, process, and organization used by the Army to recruit new members for the Army Reserve. The review assessed why the Army was not meeting recruiting objectives for the Army Reserve and recommended corrective measures the Secretary could take. Based on study recommendations, the Assistant Secretary of the Army for Manpower and Reserve Affairs approved the transfer of selected personnel management functions that assist in manning the force, from the United States Army Recruiting Command to the Army Reserve.

The transfer of additional personnel life cycle management functions to the Army Reserve combined with the Commander's Retention Program, AGR Recruiter Hire Program and the Warrant Officer Transition Program formed the basis for the new Army Reserve Retention Transition Program. This program empowers Commanders with the resources to implement a full service approach to personnel readiness by decentralizing manning efforts and placing them at Army Reserve Centers. The Commanders' primary tool is a force of trained senior Non Commissioned Officers (NCO) who hold a newly created Military Occupational Specialty (MOS) 79V—Retention Transition NCO (RTNCO). This specialty combines the tenets of retention with a full spectrum approach to retaining soldiers while providing professional growth opportunities. These non-commissioned officers (NCOs) provide career opportunities to soldiers within the Warrant Officer Program, AGR Recruiter Program and TPU Program while concurrently assisting commanders with unit retention and reenlistment. The net result of this process should be improved personnel readiness and soldier support in units.

ADDITIONAL ARMY RESERVISTS

Question. The Congress authorized and appropriated 300 additional full time Army Reservists last year. Could you tell us how that has been implemented, and the impact?

Answer. The fiscal year 2001 National Defense Authorization Act added 300 more AGRs and 650 more military technicians to the Army Reserve's strength. MG (P) Thomas J. Plewes, the current Chief, Army Reserve, said, the reason for this increase was because "we are getting our messages across—we can recruit and retain the quality soldiers we must have; more full-time support means better readiness; and our soldiers are accomplishing all the missions with honor and distinction."

The CAR's highest priority is to increase FTS levels in Army Reserve units. Although there are requirements for additional AGRs at both unit-level and above unit-level, the CAR's priority is to support unit-level requirements. The fiscal year 2001 increase of 300 AGR authorizations went to units and to support Army Reserve recruiting. These authorizations are necessary to reduce the readiness shortfalls currently existing in the Army Reserve and to improve recruiting and retention initiatives.

One of the greatest challenges facing the Army Reserve today is an insufficient number of FTS authorizations to support the over 1,900 Army Reserve troop program units. Current FTS authorizations are approximately 60 percent of what is required to support the reserve structure.

In fiscal year 2000, the Army identified "high risk" thresholds for FTS for both the Army Reserve and the Army National Guard. The HQDA high-risk FTS requirements are based on the minimum essential levels to prepare and maintain units to meet deployment standards identified in the Defense Planning Guidance. The Army Reserve high-risk threshold for AGRs and MILTECHs is 16,079 and 8,990, respectively. Current authorization levels are well below this threshold. The Army established a ramp that, with Congressional support, would achieve the high-risk FTS thresholds by fiscal year 2012. The ramp for the Army Reserve requests Congressional support for an increase of 300 AGRs and 250 MILTECHs per year.

AC Title XI Reduction.—The Army has indicated that they intend to reduce the number of Title XI AC soldiers supporting the Army Reserve by 251 in fiscal year 2002 and fiscal year 2003. The current approved FTS ramp does not factor in the affect of this reduction. An additional AGR increase will be necessary to compensate for the loss of AC soldiers. Otherwise, an AGR increase may have to be "diverted" to compensate for the loss of these AC soldiers.

The Army Reserve is requesting that Congress support increases to MILTECH and AGR authorizations at the rate of 250 and 300 per year, respectively, until the Army Reserve reaches the HQDA-validated critical levels. These increases are necessary to improve Army Reserve unit readiness.

CURRENT RATE OF MILITARY CONSTRUCTION FUNDING

Question. Please comment on how long, at the current rate of MILCON funding, it will take to replace the plant replacement value of your assets and your current backlog and annual requirement in real property maintenance.

Answer. The Army Reserve's current Plant Replacement Value is $6.5 billion. The current average rate of MILCON funding throughout this POM (2003–07) is $57.5 million. It would take the Army Reserve 113 years to replace all of its assets at the current level of funding.

The current Real Property Maintenance backlog is $1.6 billion. The Army Reserve has an average annual requirement across the POM (2003–07) of $184 million.

UNDERFUND RESERVE FORCES MILITARY CONSTRUCTION

Question. I am concerned that the Department of Defense and your services under-fund reserve forces military construction because they know the Congress will add funding for these projects. Can you comment on whether your ability to ensure your requirements is adequately addressed through the future years defense plan and other budgetary processes have improved?

Answer. The Department of Defense and the Department of the Army have for the past several years been working very hard on the Whole Barracks Renewal Program, Infrastructure Replacement, Strategic Mobility, and on the RCI. A large portion of the Army's construction dollars goes toward those "must-fund" programs. The Army Reserve has a small role in those programs and therefore receives minimal funding in support of those programs. The remaining available funding for all components is divided based on a percentage of their requirements. The Army Reserve receives its fair share of the funds remaining after the "must-fund" programs are funded. That funding represents approximately 27 percent of the Army Reserve's annual military construction requirement.

The funding provided by the Department of the Army has provided the Army Reserve with a funding level that allows limited construction of new facilities and partial modernization of selected existing facilities. The Army Reserve tries to maximize the available funding to address the worst facilities and thus improve overall readiness.

RESERVE FORCES EQUIPMENT

Question. I remain concerned about reserve forces equipment compatibility with the active components as we modernize our forces. Can you please comment on how we ensure that your respective reserve force remains relevant and deployable?

Answer. Sir, I share your concern about equipment compatibility. In today's fast-paced environment of technological developments, equipment modernization is an integral part of equipment compatibility. We have determined that the Army Reserve requires approximately $400 million, in fiscal year 2000 constant dollars, annually to maintain the current posture of equipment compatibility with the Army.

Unfortunately, the Army has not had adequate research, development and acquisition (RDA) funding to sustain the Army Reserves posture. In fiscal year 2001, the Army Reserve received $302 million for equipment procurement. Only $172 million of this funding came from the Army through the P1–R process. The remaining funding came directly from Congress via the NGREA program or direct Congressional adds. At this funding level, the equipment compatibility gap between the Army and the Army Reserve continues to widen. Without the funding from Congress, the gap would widen exponentially. Fiscal year 2001 reflects the highest funding level for Army Reserve equipment procurement since fiscal year 1994.

The Army Reserve as an essential provider of training and support operations has a particularly tough time equipping our force. More than 66 percent of the Army's combat support (CS) structure and 72 percent of the Army's combat service support (CSS) structure is in the reserve components. Our unique structure does not allow for the density of equipment items commonly found in combat formations. Additionally, since much of our force structure resides only in the reserve component, cascading equipment for the Army is not often an option for equipping our force.

For approximately 6 percent of the Army's Total Obligation authority the Army Reserve provides 20 percent of the Army's structure. Ideally, the Army should be funded adequately in RDA to allow approximately $400 million worth of equipment to (steady state) be procured on behalf of the Army Reserve in the Army's procurement program (P1–R).

TOUR LENGTHS TO THE BALKANS

Question. We were in Kosovo this past February and I was reminded again of the great contributions made by the reserves in support of our national military strategy. I understand that Army Reserve forces mobilized for duty in the Balkans typically serve deployed tours of 179 days. Combined with other required training, the combined length is typically 220–250 days for your soldiers. I believe this puts a tremendous strain on the units and the individuals who support these missions. Has the Army Reserve and the Army considered shortening tour lengths to the Balkans?

Answer. The Army Reserve is being called on to participate in more and more missions (from the traditional major theater wars to peacekeeping operations, to homeland defense). This increase in mission participation however, has not resulted in an increased strain on units and/or individuals. As such, the Army Reserve has not considered shortening tour lengths to the Balkans, or any other mission.

The vast majority of units deploying to support CINC requirements are derivative units. That is to say, it was not a previously existing unit, rather one made up mostly of volunteers, usually from existing units, of specific rank and skills.

On an individual basis, Reservists on temporary tours of active duty (TTAD), contingency operations temporary tours of active duty (COTTAD), or active duty for special work (ADSW) fill the majority of the CINC requirements. Individuals in any of these statuses also do so voluntarily.

The Army is currently developing a more formalized policy concerning repeated use of Reservists, other than during a Presidential Reserve Call-up. The Army Reserve will work with the Army to employ the optimum tour lengths, which will take into consideration our soldiers' employers, their families, appropriate veterans benefits, and mission accomplishment.

QUESTION SUBMITTED BY SENATOR CHRISTOPHER S. BOND

NATIONAL GUARD AND RESERVE EQUIPMENT ACCOUNT

Question. It is my understanding that the percentage of funding the Active components devote to their respective Reserve components varies from Service to Service. Can each of the Reserve Chiefs (Air Force Reserve, Marine Corps Reserve, Naval Reserve, Army Reserve) recount for me the impact, be it negative or positive, of DOD's decision to reduce the size of the National Guard Reserve Equipment? Are your respective Active components providing adequate resources for you to perform your mission?

Answer. Reduction in the amount of the National Guard and Reserve Equipment Appropriation (NGREA) as a source of funding to upgrade and modernize Reserve Component (RC) equipment was based on the premise that RC requirements would be included in the Army Procurement Process. Increasing offsets in Procurement Program (P–1R) have not kept pace with the reduction in NGREA funding. The result is jeopardized readiness and delayed modernization. Although equipment projections listed in the P–1R have increased, it is vital to Army Reserve readiness and transformation that these projections become reality. Although the Army Reserve can perform its wartime missions, current capabilities are limited by older, less capable equipment. With the significant role that the Army Reserve has in support of the AC, we cannot afford the continued degradation of mission essential equipment. It is essential that the procurement program keep up with Army Reserve needs to adequately maintain the readiness and transformation posture of the Army.

QUESTIONS SUBMITTED BY SENATOR KAY BAILEY HUTCHISON

EQUIPMENT MAINTENANCE AND STORAGE PROGRAM

Question. I understand that the Army Reserve recently completed a detailed analysis of its equipment maintenance and storage program and that you are presently implementing key elements of the program. Can you detail the results of the study and tell me about your concept for strategic storage of equipment? I understand that your program takes advantage of technology that inhibits equipment damage resulting from moisture-induced corrosion. Has the Government Accounting Office or any other government audit agency looked at the return on investment from such a program?

Answer. The Army Reserve did, in fact, complete a detailed analysis recently that examined critical issues involving maintenance and storage of equipment. This ex-

tensive study was designed to look at where Army Reserve logistics is and to gain a better understanding of how best to move the largest combat service support element of the Army forward into the 21st Century. The results and findings of the study, which looked specifically at the 77th Regional Support Command in New York and New Jersey, are contained in a report of over 1,000 pages. The results provided scientific recommendations on how the Army Reserve can best implement better business practices, outsource some logistics services while leveraging our core competencies, redesign and modernize our Equipment Concentration Sites and Area Maintenance Support Activities, leverage automation technology, and establish Strategic Storage Sites.

One of the key elements in the redesign of our Equipment Concentration Sites and the establishment of Strategic Storage Sites is the use of Controlled Humidity Preservation technology. Implementing this technology in equipment storage facilities has tremendous potential for reducing the cost to maintain the equipment and improving our ability to be a strategically responsive and ready force. The study completed on the 77th Regional Support Command demonstrated that the use of Controlled Humidity Preservation is a viable initiative that can be implemented throughout the Army Reserve. The Government Accounting Office looked at the use of Controlled Humidity Preservation and determined that CHP shelters normally pay for themselves, using the principle of "cost-avoidance", within the first year, and Army units can receive as much as a 9:1 return on investment. (GAO/NSIAD–97–206, Sept. 1997).

Our concept for strategic storage is essentially oriented towards supporting the Army Transformation and achieving strategic responsiveness. We have implemented a complex methodology to identify equipment assets required for unit training readiness and those assets needed only to support wartime authorizations. The concept involves placing wartime only assets into Controlled Humidity Preservation facilities strategically located near major seaports and metropolitan areas. This allows our units to maintain their training readiness while reducing the "fort to port" time for roughly 37 percent (or $2.5 billion) of Army Reserve equipment, thus greatly improving our strategic responsiveness.

ARMY RESERVE UNIT READINESS

Question. The Army is supporting an increase in Full-time Support (Active Guard/Reserve and Military Technicians) to improve Army Reserve unit readiness. What is the annual requirement to support this increase?

Answer. The critical FTS levels for the Army Reserve are 16,079 AGRs and 8,990 Miltechs. The National Defense Authorization Act for Fiscal Year 2001 provided an increase in USAR FTS endstrength and funding to support 300 AGRs and 650 Miltechs. This increase has been sustained throughout all years. The revised FTS endstrength of 13,106 AGRs and 7,094 Miltechs continues to be below the accepted level of resourcing. Note the difference of the two between fiscal year 2001 and fiscal year 2002 in the cumulative ramp was authorized to sustain Information Operations.

The Army, in coordination with the Army Reserve, continues the challenge of resourcing an additional 2,973 AGRs and 1,896 Miltechs. The ramp called for an annual increase in Army Reserve AGRs and MILTECHs of 300 and 250.

ANNUAL FTS RESOURCING REQUIREMENT

	Start point (fiscal year 2001)	Fiscal year—					
		2002	2003	2004	2005	2006	2007
AGR:							
Cumulative Ramp	13,106	13,408	13,708	14,008	14,308	14,608	14,908
Net Increase in Manpower	300	300	300	300	300	300	300
Funding Requirement	.....	$9.9	$31.4	$54.4	$78.9	$104.7	$132.3
MILTECH:							
Cumulative Ramp	7,094	7,344	7,594	7,844	8,094	8,344	8,594
Net Increase in Manpower	650	250	250	250	250	250	250
Funding Requirement	.....	$7.8	$21.4	$36.9	$53.1	$70.2	$85.0

Note: The above Ramp and Title XI cost figures are based on a 3.9 percent raise and will need to be increased based on the actual fiscal year 2002 pay raise.

The Army will reduce the number of Title XI AC soldiers in the Army Reserve by 251 as early as fiscal year 2002. The current FTS ramp does not account for this

reduction. The Army Reserve will require additional AGR positions to compensate for the loss of these AC soldiers. While the Army Reserve has made every effort to minimize the effects of the reduction, it nevertheless represents a high risk to overall readiness.

ARMY RESERVE TITLE XI OFFSET RESOURCE REQUIREMENT

AGR	Start point (fiscal year 2001)	Fiscal year—					
		2002	2003	2004	2005	2006	2007
Net Increase in Manpower	.....	251	251	251	251	251	251
Funding Requirement	.....	$8.3	$17.5	$18.2	$18.9	$19.5	$20.1

Note: The above Ramp and Title XI cost figures are based on a 3.9 percent raise and will need to be increased based on the actual fiscal year 2002 pay raise.

Achieving the full high-risk threshold of FTS is a top priority for the Army Reserve. The FTS ramp was developed to ease the Army's resourcing requirement associated with the increase of manpower. However, it is the Army Reserve's opinion that unit readiness and equipment maintenance continue to be at risk if resourcing of the manpower is not fully achieved until fiscal year 2012. The goal of the Army Reserve is to acquire and fund the critical shortfall of FTS soonest and minimize the degradation of readiness.

REPAIR AND CONSTRUCTION OF RESERVE CENTERS

Question. We have been through a period when recruiting for all Services has been very challenging and we could end up there again. On Main Street, the most prominent symbols of the military are our Reserve and National Guard centers. Many of these centers are over 50 years old and in need of repair or replacement. What can this Committee do to support the repair and construction of Reserve centers to make them a source of pride for our Reserve soldiers and their communities?

Answer. The Army Reserve recognizes the need to project a positive image on Main Street, USA. We are well aware that in many cases our soldiers and our facilities are the main source of public relations that we have in many communities across the United States. This is why we feel that it is important that we continually project a positive image at all times.

We are looking at our Military Construction program as a means of promoting that positive image. The goal of our MILCON program is to provide state-of-the-art facilities that are a source of pride for the soldiers and the community as well. To achieve that goal, we have embarked on an aggressive program that includes new construction, major rehabilitation and full facility revitalization. The Army Reserve appreciates the funding provided to us by your Committee in the form of Congressional Adds and other appropriations. We will continue to work hard in designing and constructing facilities that will well represent the U.S. Army on Main Street, USA.

CURRENT EQUIPMENT REQUIREMENTS AND SHORTFALLS

Question. The Army Reserve is an invaluable part of today's Army. In the last ten years, they have deployed soldiers and equipment around the world in support of our nation. In fact, The Army cannot perform its mission without the combat support and combat service support capability of the Army Reserve. Unfortunately, the Army Reserve has not always been funded at a level equal to its requirements. Over the past several years, Congress has been successful in appropriating funds above the President's Budget request which allows the Army Reserve to purchase mission essential equipment. For the record, would you please provide to this Committee a list of your current equipment requirements and shortfalls?

Answer. Modernization is the lynchpin to the Army's transformation plan. Particularly important is modernizing units in the Counter Attack Corps and early deploying CS/CSS units that support the CSA's stretch goal of deploying and sustaining 5 divisions in 30 days. It is crucial that those Legacy systems that provide Focused Logistics in the force and remain in the Objective Force are modernized concurrently with the supported force. The Army Reserve receives approximately 6 percent of the Army's total procurement dollars, while providing 45 percent of the CSS and 30 percent of the CS structure to the warfight. This shortfall in CS/CSS equipment procurement results in significant equipment un-financed requirements

and greatly impacts the Army Reserve's ability to support the Army's CS/CSS Transformation Strategy.

Currently Army Reserve unit mission capabilities are limited by old and outdated equipment. Some critical equipment is past its economic useful life and not deployable for wartime or contingency operations. A compilation of key Army Reserve requirements and shortfalls is attached. This is a snapshot of the requirement and as such is not a definitive source but rather a "magnitude of order" guide to overall Army Reserve requirements for the most important systems.

PRIORITY	NOMENCLATURE	2002 REQ	2002 COST
1	Black Hawk Helicopter (UH60L)	16	$179,104,000
2	FMTV, 2.5T Truck	66	8,411,370
3	FMTV, 5T Truck	78	12,480,000
4	High Mobility Multipurpose Wheeled Vehicle (HMMWV)	600	38,700,000
5	Super High Frequency Triband Advanced Range	20	37,000,000
6	Tactical Fire Fighting Truck (TFFT)	20	10,000,000
7	Chinook Helicopter (CH–47)	1	32,000,000
8	All Terrain Lifter Army System (ATLAS)	60	6,011,940
9	Rough Terrain Cargo Handler (RTCH)	16	8,400,000
10	Heavy Dry Support Bridge	2	10,000,000
11	High Frequency Radio (AN/PRC 138B)	1,003	35,084,940
12	Armored Security Vehicle (ASV)	15	9,799,995
13	Modular Causeway System	5	7,500,000
14	Line Haul Tractor (M915A3)	78	10,530,000
15	Fuel System Supply Point (FSSP)	132	2,961,420
16	Improved Ribbon Bridge (Ramp R10527)	2	11,200,000
17	Airborne/Air Assault Scraper	36	5,940,000
18	Water Distribution System	24	3,960,000
19	Common Bridge Transport	56	17,192,000
20	Wolverine	4	25,600,000
21	Hercules	2	4,000,000
22	Yard Tractor (M878A2)	21	2,387,700
23	Coyote (M56)	24	5,833,800
24	Combat Automated Service Support-Medical	10	2,049,250
25	Medical Components	244	3,499,936
26	Tent, Surgical	40	1,080,000
27	Shelter, Tactical, Expandable, Two side	50	4,950,000
28	Armored Combat Earthmover (ACE)	36	39,600,000
29	Generator Set, TRL MTD 60KW	21	504,000
30	Generator Set, Diesel, Tactical Quite Generator	322	2,206,022
30a	5–60KW	.....	.....
30b	30/60KW	.....	.....
30c	100 & 200KW	.....	.....
31	Engineering Mission Modules (EMM)	.....	.....
31a	Truck	24	6,936,000
31b	PLS Trailer	24	1,320,000
31c	Bituminous Module	13	611,000
31d	Mobile Concrete Mixer	11	1,298,000
31e	Dump Module	46	3,496,000
32	Container Assembly Refrigeration 9K BTU	45	2,624,670
33	AVLB, Hydraulic & Electric Modifications	24	2,640,000
34	JAVELIN	27	12,998,286
35	Global Positioning System	315	419,265
36	Night Vision Device (AN/PVS–7)	964	2,649,072
37	Crushing Screening and Washing Plant (CSWP)	2	4,000,000
38	Light Equipment Transport Truck, M916 Series	25	4,425,000
39	Welding Shop, Trailer Mounted	38	1,520,000
40	Sanitation Center, Field Feeding	100	1,273,500
41	Modern Burner Unit	979	2,643,300

PRI-ORITY	NOMENCLATURE	2002 REQ	2002 COST
42	Grizzly	4	23,200,000
	Total	.....	267,933,156

QUESTIONS SUBMITTED TO REAR ADMIRAL JOHN TOTUSHEK

QUESTIONS SUBMITTED BY SENATOR TED STEVENS

Question. Please describe in detail your fiscal year 2001 funding challenges, and the impact of those challenges on your ability to carry out your mission.

Answer. In fiscal year 2001, we are addressing challenges in the Operations and Maintenance, Navy Reserve (OMNR) appropriation in the areas of Real Property Maintenance (RPM), Flying Hour Program (FHP), Information Technology (IT), and Base Operation Support (BOS).

In RPM, the Naval Reserve started the year with a $66.8 million budget, which reflected a $5 million Congressional increase. Whereas this funding level has brought the Naval Reserve's RPM account in line with both the Active Navy and civilian industry standards, the Critical Backlog of Maintenance And Repair (CBMAR) for the Naval Reserve is still expected to reach $132.0 million by the end of fiscal year 2001. Managing the CBMAR remains a high priority, as it directly impacts the quality of life for the men and women of the Naval Reserve.

In the FHP, the Naval Reserve has experienced two challenges. The first has been an increase in the cost per hour (CPH) between what was budgeted and what is being executed. The second challenge has been the increased cost of a new contract for the F–5 program contract maintenance, a $2.5 million shortfall. In order to remain within budget, these shortfalls have been addressed by reducing flight hours.

In IT, the OMNR appropriation has been dealing with a shortfall of $30.2 million. Addressing this shortfall is critical to sustain IT systems that support both Active and Reserve manpower management requirements. The IT shortfall has been addressed by a combination of redirection of funds from other areas of the OMNR appropriation, most notably RPM, to the IT account and other separate reprogramming actions. A request for $7.7 million in supplemental relief to restore the RPM account is included in the Department's fiscal year 2001 Supplemental request.

In BOS, the increased cost of energy experienced across the country has resulted in a utility shortfall of $5.5 million. Similar to RPM, the Department has requested relief in the fiscal year 2001 Supplemental.

Question. I am concerned that we are at a fine line of over using the Reserves. While you want to be relevant, this over reliance stretches your force, and strains families and employers. How would you address this concern?

Answer. Senator, there are two major factors contributing to the over utilization of Naval Reserve members. The first is Funeral Honors details which mainly impacts our Full Time Support personnel. While it is our great honor to provide this service for our veterans, this support has become, at some Reserve centers, a full time job. With limited Full Time Support staff, many centers are "one" deep, which impacts the Reserve Center's ability to perform their primary mission of supporting the Selected Reserve community and their families.

The second is the peacetime contributory support needs of the Regular Navy and the willingness of our Selected Reservists to respond to those needs. Performing peacetime contributory support provides some outstanding training for our reservists, however it does not always enhance and blend with mobilization billet. An increased reliance on reservists to meet active duty shortfalls contributes to excess use of reservists. To ease the resulting stress on reservists, their employers and their families the Naval Reserve is doing the following:

—Educating reservists to carefully evaluate family, employer and Naval Reserve priorities prior to volunteering for active duty in excess of what is normally required.

—Educating our members and emphasizing the important role of the Employer Support of the Guard and Reserve (ESGR) and mandating training on the rights and responsibilities of reservists and employers under the Uniform Services Employment and Reemployment Rights Act.

—Allowing Naval Reservists to flex drill, which allows them the ability to meet the mission of the Navy while minimizing negative impact on employers.

—Preparing and issuing a family oriented Naval Reserve Handbook to educate and inform families and bring them into the formal decision making process.
—Working with Family Support Centers to improve and expand the support they provide to Reserve members and their families.
—In addition, the Naval Reserve has a highly organized and efficient Ombudsman program in place. The Naval Reserve Ombudsmen are highly trained professional volunteers that work with our families and provide the following services:
—*Pre-deployment Briefings*.—Assisting the families in understanding the elements that are involved in mobilization or deployment.
—*Spouses' Days*.—Ombudsman conduct workshops that acquaint Reserve Family members with assets at their disposal that can be used in case of a deployment. These workshops also often include personnel who assist families in developing Powers of Attorneys and wills and in obtaining ID Cards.

Reserve Ombudsman are also networked through the Reserve Ombudsman On-line site and can partner other Ombudsman in different locations to better assist families through on-line conferencing.

Question. Please address your recruiting and retention status. What challenges do you find manning your force, and what initiatives do you have in place? Is there legislative authority you need that you don't have?

Answer. Naval Reserve recruiting is doing very well in meeting goal and quality of individuals being brought into the Naval Reserve. Selected Reserve retention for fiscal year 2001 is 96.5 percent. Retention has remained high throughout the years for the Naval Reserve, however attrition is the real issue. Attrition has decreased from 35 percent in previous years to approximately 25 percent in fiscal year 2001.

The majority of the Naval Reserve personnel are prior service veterans. The challenge is to find these personnel in sufficient numbers to meet our recruiting goals since the number of personnel leaving the active service is declining.

Some initiatives underway to alleviate these shortfalls are:

—Increased the recruitment of Non-prior service personnel and additionally we have initiated a Non-Prior Service (NPS) basic test program with Active Duty. This program affords active Navy Delayed Entry Program attrites the opportunity to attend boot camp and Corpsman "A" school prior to assignment to a Naval Hospital Reserve unit.
—We have increased recruiter manning from 622 Enlisted and 67 Officers to 692 Enlisted and 77 Officers.
—We are expanding the Fleet Concentration Area Recruiting concept to all USN shore activities. Fleet Concentration Area Recruiting in San Diego, Bangor, Norfolk/Virginia Beach, Jacksonville/Mayport/Kings Bay have been successful, with a dramatic increase from 2.0 to 5.6 accessions per recruiter per month.
—Proposed changes to the Naval Reserve Career Recruiting Force governing instruction to allow long-term hometown recruiting as a career option for enlisted recruiters.
—Ongoing cooperative efforts with active Navy Recruiting Command in advertising, leads/referrals, market analysis, and special events.
—A professional advertising campaign and demographic research contract will allow us to target and reach our accession sources more effectively. Coordinated marketing in all media utilizing an adequate $8 million advertising budget and a national recruitment marketing firm will increase Naval Reserve awareness while instilling pride in those currently serving.

There is no legislative authority currently needed for fiscal year 2001.

Question. After the attack on the U.S.S. *Cole*, I understand some of your forces deployed to the Persian Gulf for anti-terrorism and force protection missions. Are those forces still on station? How is the mission going?

Answer. Senator, Naval Reservists from Naval Coastal Warfare Group Two deployed in December 2000 to provide force protection and harbor security in a Persian Gulf port. The principle mission of this force is security for the logistics task force and the Military Sealift (MSC) ships. Recently, this mission requirement was extended to the end of this fiscal year. Forces on station have rotated every three months, and will continue to do so. Additionally, Naval Reservists from Naval Coastal Warfare Group One units will relieve the U.S. Coast Guard Reserve Port Security Unit providing similar services in another Persian Gulf port later this month. Naval Reserve participation will increase from approximately 75 personnel to over 120 members.

This mission has been a success and the Central Command has praised the performance of our personnel.

Question. How are you doing with pilot retention? Are Reserve pilot pays and bonuses properly structured to retain your experienced pilots?

Answer. Senator, we are doing extremely well with pilot retention. We are retaining our pilots and have all of our requirements filled. Evidence suggests that reserve pilot pays, such as ACIP (Aviation Career Incentive Pay) and ACCP (Aviation Career Continuation Pay), are accomplishing their designed mission. Additionally, the command bonus is having the desired effect and contributing to our high retention rate.

Question. I am concerned that the Department of Defense and your services under-fund reserve forces military construction because they know the Congress will add funding for these projects. Can you comment on whether your ability to ensure your requirements are adequately addressed through the future years defense plan and other budgetary processes has improved.

Answer. The Naval Reserve Military Construction (MCNR) program has historically been budgeted at approximately 3 percent of the Active Navy Military Construction (MCON) program. That level of funding is inadequate to address large projects in a single program year. These large projects must be phased and supported in multiple years of the future years defense plan (FYDP) and sometimes displaces execution of smaller budgeted projects.

Question. I remain concerned about reserve forces equipment compatibility with the active components as we modernize our forces. Can you please comment on how we ensure that your respective Reserve force remains relevant and deployable?

Answer. In the Naval Reserve, equipment modernization priorities are more related to equipment capability than compatibility. For the most part, Naval Reserve equipment is compatible with Active Component equipment. However, Naval Reserve equipment modernization requirements far exceed funding available for modernization. Naval Reserve equipment requirements compete among Navy requirements during budget formulation. Although Naval Reserve equipment modernization requirements are vetted, they have not been fully funded due to higher priority Active Component requirements and scarce procurement funding available.

QUESTION SUBMITTED BY SENATOR CHRISTOPHER S. BOND

NATIONAL GUARD RESERVE EQUIPMENT ACCOUNT

Question. It is my understanding that the percentage of funding the Active components devote to their respective Reserve components varies from service to service.

Can each of the Reserve Chiefs (Air Force Reserve, Marine Corps Reserve, Naval Reserve, Army Reserve) recount for me the impact, be it negative or positive, of DOD's decision to reduce the size of the National Guard Reserve Equipment (Appropriation)? Are your respective Active components providing adequate resources for you to perform your mission?

Answer. It was not DOD's decision to reduce the size of the National Guard and Reserve Equipment Appropriation (NGREA), however, the amount of NGREA funding the Naval Reserve receives has declined from $202 million in fiscal year 1997 to $5 million in fiscal year 2001. With Navy's overall procurement requirements far exceeding funding available, the Navy's ability to fund the equipment modernization requirements of the Naval Reserve has not kept pace with the dramatic reduction in the NGREA over the past five years. The net reduction in procurement funding available to the Naval Reserve is negatively impacting equipment modernization and thereby Naval Reserve capability.

QUESTIONS SUBMITTED TO GENERAL DENNIS M. MCCARTHY

QUESTIONS SUBMITTED BY SENATOR TED STEVENS

Question. Please describe in detail your fiscal year 2001 funding challenges, and the impact of those challenges on your ability to carry out your mission.

Answer. The Marine Corps Reserve has funding challenges in operations and maintenance accounts and equipment procurement accounts.

1. Operations and Maintenance Challenges. The Marine Corps Reserve has shortfalls in O&MMCR for facilities (utilities, base operations, maintenance of real property), equipment and vehicle maintenance, and flight hours (O&MNR).

a. Facilities: There is an unprojected 40 percent utility cost increase, 40 percent cost escalation for base operations support (BOS), and continued escalation in the backlog of maintenance and repair of real property.

[In millions of dollars]

Commodity area	*Amount*
Utilities	2.3
Base Ops	3.2
Maint of Real Property	2.0
Total	7.5

(1) Utility costs have risen by an unprojected 40 percent at all of the 185 MARFORRES sites during fiscal year 2001, leaving MARFORRES critically short of funding.

(2) The cost of Base Operations Support (BOS) has also escalated by 40 percent during fiscal year 2001. These are "must pay" costs such as leases and permits, and our fair share of payment for BOS functions that our I–I's are not manned to provide: ground maintenance, HVAC, refuse service, pest control and custodial services. Many interservice support agreements have increased for centers where we are tenants. We have also faced absorption of entire training center operating costs in cases where the host service has relocated. Other BOS shortfalls include: GME/GSA vehicle lease program: GSA funding has been reduced at the same time that we have experienced increased vehicle usage and mileage to support funeral honors.

Environmental: MFR requires hazardous material waste and storage facilities at 33 sites to be in compliance with federal and state regulations. Several sites are awaiting remediation work due to on-site contamination and lead paint and asbestos removal. These costs have shown a steady increase and are now 30–40 percent above budget projections. Meeting the "must pay" requirements from within existing appropriations will impact Maintenance of Real Property (MRP) and Operating Forces funding. Replenishment, replacement, and maintenance of some equipment would have to be deferred to future years, creating a bow wave in these accounts.

(3) Several MARFORRES facilities are in deteriorated condition, posing health and safety risks to the Marines. The fiscal year 2000 Commanding Officer's Readiness Report (CORRS) identified 65 percent of the Marine Corps owned facilities (24 sites) as inadequate. The backlog of maintenance and repair has escalated from $1.2 million in fiscal year 1995 to well over $12 million in fiscal year 2001, due to the combined effects of years of under funding MRP and insufficient MCNR funding for revitalization.

b. Equipment and Vehicle Maintenance: Rising repair costs for maintenance of armored vehicles, trucks, howitzers, and other ground equipment.

[In millions of dollars]

Commodity area	*Amount*
Maint of Equipment	5.0

Maintenance of Equipment and Vehicles includes Critical Low Density Repairables (CLD) supporting radar and communication assets; Depot Level Repairables (DLR) supporting repair parts for such equipment as tanks, trucks, AAVS, HMMWVs; and other maintenance of equipment. While not "must pays" per se, when CLD and DLR equipment fails, the equipment is deadlined, training is impaired and readiness impacted. The Marine Corps is also reaching or exceeding the service life of many major ground weapon systems. Additional funding for Maintenance of Aging equipment is required to cover rising repair costs for Reserve Component organic and intermediate level maintenance for tanks, AAVs, LAVs, trucks, howitzers, and other ground equipment.

2. Equipment Procurement Challenges

a. F/A–18A Engineering Change Proposal (ECP) 583 Requirement: $60.6 million.

Of 76 F/A–18As, 44 have been funded and contracted for retrofit. The 32 remaining unfunded upgrades include 26 Reserve aircraft. 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 current difference in capability between the F/A–18A and F/A–18C is significant in several areas including weapons employment, communications, and sensors. ECP–583 rectifies these deficiencies. ECP–583 provides the war fighting CINC with enhanced battlefield aircraft superiority and sustainment. ECP–583 will ensure seamless precision strike commonality between the reserve F/A–18As and the active F/A–18A/C/D USMC squadrons by providing the necessary modernization required to support the Marine Corps Total Force. Operational and logistical commonality with the F/A–18C will be a large benefit of the upgrade. Acceleration of the avionics upgrade minimizes obsolescence and multi-configuration

component management, which reduces the logistics footprint, and training for pilots and maintenance.

Question. I am concerned that we are at the fine line of over using the Reserves. While you want to be relevant, this over reliance stretches your force, and strains families and employers. How would you address this concern?

Answer. Marines and their families are the most important asset we have. The Marine Corps recognizes the need to provide predictability and adequate notice to aid Marines, their families, and employers in planning for and accommodating periods of extended active duty. To date, the Marine Corps Reserve has not noted any negative impact on the force, on families, or on employers resulting from increased OPTEMPO. New Reserve missions like Guantanamo Bay and UNITAS provide predictability for the Marine, the family and the employer.

An increase in attrition would be the most important indicator of overuse or strain on families and employers. The Marine Corps Reserve has met its goal of keeping overall attrition between 25 percent and 30 percent in fiscal year 1999, fiscal year 2000 and to date in fiscal year 2001. Because participation above 48 drills and 15 days Annual Training is voluntary, there is anecdotal evidence that increased OPTEMPO for meaningful training and real world opportunities may actually have a positive affect on retention.

The Marine Corps Reserve instituted an Exit Survey that is administered to Marines as they leave their unit. The survey transitioned to a web-based form in January and is currently being tested by Marine Forces Reserve. The response to the prior manual survey, although limited, offered no indication that increased OPTEMPO or PERSTEMPO was a contributing factor in a Marine's decision to discontinue active participation in the reserves.

Additionally, the Marine Corps Reserve, through the Marine Corps Total Force System (MCTFS), began tracking PERSTEMPO on the congressionally mandated start date of 1 October 2000.

Question. Please address your recruiting and retention status. What challenges do you find manning your force, and what initiatives do you have in place? Is there legislative authority you need that you don't have?

Answer. The Marine Corps Reserve continues to attain monthly recruiting missions in fiscal year 2001. Our biggest challenge is to find officers whose military occupational specialties match unit requirements within a reasonable commuting distance. The Marine Corps Reserve recruits over 99 percent of its officers from our prior service Individual Ready Reserve (IRR) population. This pool decreased during fiscal year 1999 and fiscal year 2000, presenting more difficulty for our recruiters. This fiscal year, that trend has been reversed and the IRR officer population has started to increase. Transitional Recruiters at major bases and stations are actively targeting Marines before they leave active service, emphasizing the benefits and opportunities of Reserve service. Additionally, we are exploring ways to improve our communication with current, former, and retired Marines by developing an expanded transition assistance program that will enhance connectivity and affiliation opportunities for Marines after they leave active service.

Regarding legislation, under current law, Montgomery GI Bill-Selected Reserve (MGIB–SR) benefit eligibility requires a six-year drilling obligation followed by two years of availability for mobilization as a member of the Individual Ready Reserve. Reducing the drilling obligation period for MGIB–SR eligibility from six years to four years would allow us to more effectively match the benefit to the education patterns and lifestyle changes that occur after college graduation. A four-year drilling commitment commensurate with four years of college would remove the drilling obligation as our Marines establish themselves in their civilian careers. This would then be followed by a four-year "inactive Reserve" commitment during which they would remain available for mobilization should the need arise. Because the services control the number of contracts offering MGIB–SR eligibility, this change can be absorbed within existing appropriations, making it a no cost option. While the Marine Corps Reserve continues to meet its recruiting challenges, legislative authority to provide this benefit for a four-year drilling obligation would provide an innovative tool that would enable us to more adequately address evolving recruiting challenges and achieve future success.

Question. How are you doing with pilot retention? Are reserve pilot pays and bonuses properly structured to retain your experienced pilots?

Answer. The Marine Corps Reserve experienced a pilot attrition rate of 25.53 percent for fiscal year 2000. The overall Selected Marine Corps Reserve officer attrition rate for fiscal year 2000 was 21.97 percent. When compared to the overall officer attrition, the Marine Corps Reserve pilot attrition was 3.56 percentage points higher. Seventy-two percent of pilot losses resulted from transfers to the Individual Ready Reserve. Exit survey data indicates that conflicts with civilian jobs is the pri-

mary reason for ending affiliation. Although pilot attrition was slightly higher than overall officer attrition, we do not view this as a significant trend. The current participation-based structure of Reserve component aviator pay and allowances is fair and equitable. Historically, participation by our experienced pilots has been motivated by a desire to continue applying the critical skills earned on active duty as a member of the Marine Corps Reserve.

Question. I understand you have recently picked up some missions from the active Marine Corps. Please tell us more about that.

Answer. Marine Forces Reserve is currently involved in two long-term operations to help alleviate active duty OPTEMPO. During March 2001, a reserve platoon made up of volunteers from 2d Battalion, 23d Marines deployed to Guantanamo Bay, Cuba for 120 days. The reinforced platoon is supporting the ongoing Guantanamo Bay security mission effectively replacing an active duty platoon commitment. With 25 days workup and 5 days stand-down, the platoon will be on active duty for a total of 150 days. Initially planned for odd-year rotations, Marine Forces Reserve is studying the feasibility of conducting the security mission every year.

Marine Forces Reserve will also carry out the fiscal year 2002 UNITAS deployment to South America. Volunteers for this company-size deployment are currently being identified to fill this six-month commitment. After one year of drills and annual training focusing on mission preparation, Marines will spend one month of full-time preparation at Camp LeJeune, North Carolina beginning in May 2002. In June 2002, the Marines will deploy to South America for 4½ months. There will also be a post-deployment stand-down period of half a month.

Question. Last year we added 58 full time reservists for the Marine Corps Reserve. How has that benefited your force?

Answer. The 4 officers and 54 enlisted Active Reserve end strength increase was actually a rescission of the QDR reduction. The authority you provided allowed us to retain 58 Marines we had been scheduled to lose. The Marine Corps Reserve has assigned these 58 additional personnel to small Marine Corps Reserve sites throughout the continental United States. Small staffs of active duty Marines largely administer the Marine Corps Reserve. These staffs provide for the day-to-day operations, training and administration of the Reserve. They have also historically provided community outreach through such means as color guards, Toys for Tots, military funeral honors details, and presentations to local organizations. Each staff is comprised not only of administrative and logistics personnel, but with Marines qualified to provide continuous training and equipment maintenance. A small site typically includes approximately eight active duty Marines that provide for the daily operations of company size (120–180 personnel) units. The reserve force has benefited by an increased active duty presence that can better manage the increasing operational tempo, heightened readiness requirements and community outreach missions. These additional personnel have increased numerous sites to the threshold requirement of eight Marines and have kept staffing to previously validated personnel requirements at other sites.

Question. I am concerned that the Department of Defense and your services under-fund reserve forces military construction because they know that Congress will add funding for these projects. Can you comment on whether your ability to ensure your requirements is adequately addressed through the future years defense plan and other budgetary processes have improved?

Answer. The Commandant has stated that readiness of the operating forces is the Marine Corps' highest priority, and that readiness rests on four pillars: (1) Marines and their families, (2) "legacy systems", (3) infrastructure, and (4) modernization. The challenge for the Marine Corps is to maintain the strength of each, while achieving a balance in the application of its resources. Within the parameters of this fiscal challenge, the ability of the Marine Corps to ensure adequate funding levels for reserve military construction through the Future Years Defense Plan and the budget process has improved over the past 4 years. The average level of funding for Marine Corps reserve military construction, prior to Congressional adds, for the years fiscal year 1993-fiscal year 1997 is $1.2 million. The average level of funding for Marine Corps reserve military construction, also prior to Congressional adds, for the years fiscal year 1998-fiscal year 2001 is $4.8 million, a significant improvement. (These numbers do not include funding for planning and design.) The Marine Corps will continue to carefully weigh the many priorities involved in maintaining its emphasis on operational readiness, and will provide a level of funding for reserve military construction that addresses the most critical requirements and is consistent with the best interests of the Marine Corps.

Question. I remain concerned about reserve forces equipment compatibility with the active components as we modernize our forces. Can you please comment on how we ensure that your respective reserve force remains relevant and deployable?

Answer. As part of our Total Force Policy, Marine Corps modernization plans are accomplished as part of our single acquisition objective process, wherein all initial quantities and planned sustainability requirements for both the Active and Reserve component are considered. This single acquisition strategy ensures the Reserve receives the same equipment as the Active Component. Marine Forces Reserve (MARFORRES) units are fully integrated into the active forces for mission accomplishment across the complex spectrum of conflict.

MARFORRES is ready today, but its readiness has come at the expense of investment in modernization and infrastructure. Reserve Marines are working hard to maintain and improve equipment readiness. The key to sustain the relevancy and deploy ability of the Marine Corps Reserve in the long term is to continue to replace current legacy systems. The funding level must be sufficient to accelerate the pace of Marine Corps modernization in order to shorten the period of increased Total Force expense for sustainment of the aging "legacy" systems. The Marine Corps, with the help of Congress through the National Guard and Reserve Equipment Appropriation and other congressional adds, is currently upgrading the Reserve's 48 F/A–18A's with Engineering Change Proposal 583 (ECP 583)(22 of 48 upgrades are funded) and 21 CH–53E's with Helicopter Night Vision System (HNVS) kits (10 of 21 upgrades are funded). In fiscal year 2008, the Marine Corps, plans to field High Mobility Artillery Rocket Systems (HIMARS) to the Reserve. In the future, the Marine Corps plans to transition to the MV–22 helicopter and the Advanced Amphibious Assault Vehicle (AAAV). During this transition period, a mixed fleet of helicopters and amphibious vehicles will exist for several years in the Active and Reserve units. The Marine Corps is dedicated to planning to assure a coordinated delivery of the aircraft and vehicles while maintaining a high state of readiness across the Active and Reserve units.

Question. Describe your plan to upgrade your fleet of F/A–18A aircraft and rotary wing aircraft. Do you have the resources you need?

Answer. Marine aviation possesses limited resources across the board to invest in modernization and recapitalization of aircraft. The Marine Corps includes both active and reserve requirements in determining funding priorities. Our plan is to mirror the reserve with the active component. Current upgrades to accomplish this goal are as follows:

F/A–18A.—The current program objective is to upgrade 76 F/A–18As with Engineering Change Proposal 583 (ECP–583); 28 active and 48 reserve F/A–18As. This upgrade will increase the capability of the F/A–18A to a level compatible with the F/A–18C lot XVII, an aircraft eight years newer. This increase in capability will help mitigate strike master plan shortfalls and increase operational flexibility across the spectrum of conflict by increasing interoperability of F/A–18 assets. Current program funding upgrades 44 F/A–18As, 22 active and 22 reserve through fiscal year 2003. This program currently requires $246.5 million to complete.

CH–46E.—Based on the current transition plan and introduction of the MV–22,the remaining Marine Corps CH–46s are scheduled to receive the Engine Reliability and Improvement Program (ERIP). This program's current requirement is fully funded and, thanks to Congressional support, we were able to start it one year early (in this fiscal year). Current estimate is that this program will be complete in fiscal year 2007. As the restructuring of the MV–22 program becomes more definitive, Marine Aviation will have to examine how many more ERIP kits to procure to ensure the CH–46 remains operationally effective until replaced by the MV–22.

The UH–1N and AH–1W will continue to provide the combat assault support and attack helicopter requirements for the Marine Corps through 2014. The key operational and safety modifications for the aircraft include communication and navigation upgrades that provide aircrew with precision navigation and modernized communication equipment (radio suite); fielding of a modernized electronic warfare suite to enhance aircraft survivability against Surface-to-Air Missiles; aircraft safety upgrades to increase system reliability and operational effectiveness; and enhancements to the day/night war fighting capability through the UH–1N Navigational thermal Imaging System (NTIS).

The goal of the current operational safety improvement programs is to eliminate safety hazards, remedy obsolescence and maintain significant operational capability until the fielding of the replacement aircraft—the UH–1Y and AH–1Z. The H–1 Upgrade Program is a key Marine Corps modernization effort designed to resolve existing safety deficiencies and significantly enhance the operational effectiveness of both the UH–1N and the AH–1W. Aircraft agility, airspeed, range, and mission payload are only a few of the significant improvements included in the Upgrades Program. Additionally, the commonality gained between the UH–1Y and AH–1Z (projected to be 85 percent) will significantly reduce life-cycle costs and logistical footprint, while increasing the maintainability and deploy ability of both aircraft.

This program extends the service life and increases the operational capabilities of both aircraft through improvements in crew and passenger survivability, payload, power available, endurance, range, airspeed, maneuverability and supportability. Both aircraft include a fully integrated cockpit upgrade to reduce cockpit workload and improve mission effectiveness.

CH–53E.—Upgrades to the CH–53E include the procurement of Forward Looking Infrared Helicopter Night Vision System (HNVS) "A" and "B" Kits. 20 HNVS "A" Kits remain to be procured (11 of those are in the Reserves) and 105 HNVS "B" Kits (10 in the Reserves) remain to fulfill this upgrade requirement.

QUESTION SUBMITTED BY SENATOR CHRISTOPHER S. BOND

Question. It is my understanding that the percentage of funding the Active components devote to their respective Reserve components varies from Service to Service.

Can each of the Reserve Chiefs (Air Force Reserve, Marine Corps Reserve, Naval Reserve, Army Reserve) recount for me the impact, be it negative or positive, of DOD's decision to reduce the size of the National Guard Reserve Equipment? Are your respective Active components providing adequate resources for you to perform your mission?

Answer. The Marine Corps Reserve is represented fully in the Marine Corps resourcing process and receives an equitable share of available funding. As part of our Total Force Policy, Marine Corps equipment procurement is accomplished through our single acquisition objective process, wherein all requirements, to include sustainability requirements for both the Active and Reserve component, are considered and resourced. This single acquisition strategy ensures the Reserve Component receives the same equipment as the Active Component.

QUESTIONS SUBMITTED TO MAJOR GENERAL JAMES E. SHERRARD, III

QUESTIONS SUBMITTED BY SENATOR TED STEVENS

FISCAL YEAR 2001 FUNDING

Question. Please describe in detail your fiscal year 2001 funding challenges, and the impact of those challenges on your ability to carry out your mission.

Answer. Our top funding challenges are initiatives to improve recruiting and retention of Reserve personnel, an aging fleet and a decreased modernization budget.

Recruiting and Retention.—The Reserve achieved 86 percent of its fiscal year 2000 recruiting goal—we fell short by 1,502. Although below our accession goal, the Reserve achieved 98.1 percent overall end strength and filled over 98 percent of our wartime-tasked positions; accessions were highest since fiscal year 1995. We are experiencing the challenges of a robust economy, higher college enrollment, a lower propensity to enlist and a shrinking pool of potential prior service accessions. The Reserve exceeded its retention goal of 82 percent in fiscal year 2000 with an overall retention rate of 88 percent. Retention rates are healthy for the enlisted force and support officers; however, we are concerned about the retention of pilots, navigators and non-rated operators. Current Air Force Reserve Command (AFRC) pilot inventory has leveled out at approximately 3,440, while the requirement is 3,667. Level and retention of full-time personnel is a concern due to the high personnel tempo (PERSTEMPO).

Aging fleet.—The following shows the age of the AFRC fleet, by aircraft:

C–5A	32.0
C–141C	35.0
KC–135E	42.0
KC–135R	39.5
C–130E	37.5
C–130H	11.1
C–130J	5.0
WC–130H	35.5
WC–130J	3.0
B–52H	39.5
A/OA–10	21.0
F–16C/D	14.0
HC–130N	31.0
HC–130P	35.4

HH–60G	10.5
C–130E	37.0

An aging fleet leads to increased Operations and Maintenance (O&M) spending for maintenance.

Decreased modernization budget.—With an aging fleet and no new systems projected, we are attempting to modify older aircraft (KC–135, C–5A, F–16 and A–10), but investment funding for modifications remains severely constrained. No follow-on mission for our C–141 unit-equipped squadrons. Reengining of our last two KC–135 units.

Judgement Fund.—An additional challenge we are facing is the $11.9 million owed to the U.S. Treasury's Judgement Fund. As you know, this bill must be paid out of Military Construction (MILCON) monies. If we are forced to pay this must-pay bill, our fiscal year 2002 MILCON budget will be severely impacted, if not decimated.

RESERVES

Question. I am concerned that we are at the fine line of over using the Reserves. While you want to be relevant, this over reliance stretches your force, and strains families and employers. How would you address this concern?

Answer. We, too, are concerned about the effect the high tempo has on our Reservists, their families, and their civilian employers. Today, the average Air Force Reservist performs 90 duty days, far above the required "one-weekend-a-month, two-weeks-per-year" of years past.

The high tempo has also had an impact on our ability to conduct training. Personnel who deploy/use annual tour to support taskings outside the unit are getting valuable experience; however, they are not taking care of some of the recurring training requirements which would have been addressed during their annual tour had they performed their duty at home station. We must then ask our personnel to give additional time to "catch up" on the training requirements, which were not part of the deployment scenario. This places a burden on many traditional Reservists, who are attempting to balance the demands of their reserve duty with those of their civilian job and family.

We are working to find ways to alleviate the stress caused by increasing time away from home station. One way is participation in the Expeditionary Aerospace Force, which has already given us greater predictability in scheduling time away from home and work. We are constantly working with civilian employers to keep the lines of communication open and we support current legislation offering tax incentives to employers who employ reservists. Additionally, we are working with the active force to validate all current training events for relevancy as well as looking for optional modes to deliver the training.

RECRUITING AND RETENTION STATUS

Question. Please address your recruiting and retention status. What challenges do you find manning your force, and what initiatives do you have in place? Is there legislative authority you need that you don't have?

Answer. The Reserve achieved 86 percent of its fiscal year 2000 recruiting goal—we fell short by 1,502. Although below our accession goal, the Reserve achieved 98.1 percent overall end strength and filled over 98 percent of our wartime-tasked positions; accessions were highest since fiscal year 1995. We are experiencing the challenges of a robust economy, higher college enrollment, a lower propensity to enlist and a shrinking pool of potential prior service accessions. With assistance from Congress, we are increasing our recruiting force by 50 in fiscal year 2001. As of April 2001, we are tracking at 104 percent of our recruiting goal. The Reserve exceeded its retention goal of 82 percent in fiscal year 2000 with an overall retention rate of 88 percent. Retention rates are healthy for the enlisted force and support officers; however, we are concerned about the retention of pilots, navigators and non-rated operators. Current Air Force Reserve Command (AFRC) pilot inventory has leveled out at approximately 3,440, while the requirement is 3,667.

Current Recruiting and Retention Initiatives include: Active Guard/Reserve (AGR) Aviator Continuation Pay (ACP); Reinstatement of full-time unit Career Advisors; Special salary rate for Air Reserve Technician pilots; Montgomery GI Bill (MGIB) kicker; Tuition assistance; Prior Service and Nonprior Service enlistment bonuses for critical skills.

Future Initiatives: Elimination of 1/30th rule for Aviation Career Incentive Pay (ACIP) and Career; Enlisted Flyer Incentive Pay (CEFIP); Basic Allowance for Housing (BAH) disparity for single Reservists; Elimination of disparities between BAH I and BAH II; Extend time limit on use of MGIB beyond 10 years; Adjust 14-

year cutoff of bonuses to incentivize beyond 20 years; Increase prior service enlistment bonus from $5,000 to $8,000 to provide same authority as non-prior service bonus.

RESERVE PILOTS

Question. How are you doing with pilot retention? Are reserve pilot pays and bonuses properly structured to retain your experienced pilots?

Answer. Retention of pilots is of great concern. Historical trends have been toward retention of pilots until retirement. Recent indicators reveal an increase in number of Air Reserve Technicians (ARTs) who are leaving early. The Reserve has instituted a special salary rate for technician pilots. Major airlines hiring, high TEMPO and perceptions of better civilian pay and working conditions are reasons for leaving. Active Guard and Reserve (AGR) pilots are currently receiving aviation continuation pay like their active duty counterparts.

The following slide illustrates the retention rates for the Reserve pilot force:

RESERVE PILOT RETENTION

[AFRC Pilot Retention Rates]

	Percent				
	Fiscal year—				
	1996	1997	1998	1999	2000
Pilots total (AFRC)	93.9	90.0	89.3	89.9	87.7
Pilots (ARTs) (ART pilots retained as ARTs)	86.1	83.8	85.5	84.4	80.2
Unit AGR	.....	.....	.....	100	100

Approximately 12 percent of AFRC ART pilot force moves to Traditional Reserve yearly. Number of pilots transitioning from TR to ART nearly compensates for ART to TR transition.

Major Airlines hiring, high OPTEMPO and perceptions of better civilian pay and working conditions are reasons being given for leaving prior to reaching MSD.

AEROSPACE EXPEDITIONARY FORCE

Question. Please describe how the Air Force's transition to the aerospace expeditionary force, or AEF, will impact the Air Force Reserve.

Answer. The Air Force Reserve is an active and enthusiastic participant in the Expeditionary Aerospace Force (EAF). The EAF brings predictability and stability, better incorporates the total force, provides a reconsitution period and provides the tools to better manage the force. During EAF Cycle 1, AFRC deployed 14,249 personnel and during Cycle 2, 12,425 personnel. All personnel are volunteers and may rotate on a 15 day in country schedule. We believe this is a win-win situation for the Reservist (it allows them to use their wartime skills), their employers and the family.

RESERVE MILCON

Question. I am concerned that the Department of Defense and your services under-fund reserve forces military construction because they know the Congress will add funding for these projects. Can you both comment on whether your ability to ensure your requirements are adequately addressed through the future years defense plan and other budgetary processes has improved?

Answer. Overall, funding for the Air Force Military Construction (MILCON) program has decreased significantly. In addition, aging infrastructure continues to require additional repair and replacement, further stressing the Air Force MILCON budget.

Air Force Reserve Command (AFRC) requirements are included in the total Air Force program for initial development. The Air Force then validates and scores each project according to the MAJCOM priority, the type of project and mission impact.

Because of limited resources and other must-pay bills, AFRC is awarded only one or two projects per year. To illustrate, in fiscal year 2001, the Air Force submitted $595.5 million in MILCON priorities, including $14.9 million (2.5 percent) for AFRC. The additional $21.7 million in the Reserve MILCON budget came from Congressional adds, which we greatly appreciate.

An additional challenge we are facing is the $11.9 million owed to the U.S Treasury's Judgement Fund. As you know, this bill must be paid out of MILCON monies. If we are forced to pay this must-pay bill, our fiscal year 2002 MILCON budget will be severely impacted, if not decimated.

The following is a current list of approved Air Force Reserve military construction projects:

[In millions of dollars]

Fiscal Year	State/Base	Project	Type	PA
2002	AL: Maxwell AFB	Maintenance Hangar	Current Mission	9,276
2002	IN: Grissom ARB	ADAL Maint Hangar	Current Mission	5,700
2002	MO: Whiteman AFB	Squadron Operations Facility	Current Mission	3,350
2002	NY: Niagara Falls ARS	Visiting Quarters Phase I	Current Mission	8,300
2002	PA: Willow Grove ARS	Joint Wing Headquarters	Current Mission	5,700
	Fiscal Year 2002 Total			32,326
2003	AL: Maxwell AFB	Logistics Complex	Current Mission	5,000
2003	CO: Peterson AFB	Fuel Systems Maintenance Dock	Current Mission	7,350
2003	DE: Dover AFB	Wing Headquarters Facility	Current Mission	3,300
2003	MA: Westover ARB	Security Forces Operations	Current Mission	3,900
2003	MN: Minn-St Paul ARS	Hangar Complex	Current Mission	15,197
2003	NC: Seymour Johnson AFB	Civil Engineer Maintenance Facility	Current Mission	2,000
	Fiscal Year 2003 Total			36,747
2004	CA: Travis AFB	Squadron Ops/Aircraft Gen Squad	Current Mission	9,736
2004	FL: Homestead ARS	Services Training Facility	Current Mission	6,000
2004	GA: Dobbins ARB	Construct South Cobb Entrance	Current Mission	3,200
2004	MA: Westover ARB	Base Operations	Current Mission	2,132
2004	MI: Gen Mitchell ARS	ADAL Composite Training Facility	Current Mission	2,300
2004	MN: Minn-St Paul ARS	Aircraft Maintenance Shop Complex	Current Mission	6,200
	Fiscal Year 2004 Total			29,568
2005	MN: Minn-St Paul ARS	Consolidated Training Facility	Current Mission	3,121
2005	NJ: McGuire AFB	ADAL Wing HQ Facility	Current Mission	3,550
2005	PA: Pittsburgh ARS	Renovate Lodging Facility B–216	Current Mission	3,016
2005	PA: Pittsburgh ARS	Consolidated Lodging Facility	Current Mission	18,200
	Fiscal Year 2005 Total			27,887
2006	IN: Grissom ARB	Services Complex—Phase 3	Current Mission	12,773
2006	OH: Youngstown ARS	Consolidated Mission Support Facility	Current Mission	9,410
2006	PA: Willow Grove ARS	Avionics Shop	Current Mission	2,500
	Fiscal Year 2006 Total			24,683
2007	FL: Eglin AFB (Duke Fld)	Civil Engineer Training Facility	Current Mission	3,200
2007	GA: Dobbins ARB	Training Center	Current Mission	4,200
2007	IL: Scott AFB	Wing HQ Facility	Current Mission	3,700
2007	MA: Westover ARB	Vehicle Maintence Facility	Current Mission	5,191
2007	NJ: McGuire AFB	Airlift Control Flight Facility	Current Mission	2,000
	Fiscal Year 2007 Total			18,291

RESERVE FORCES EQUIPMENT COMPATIBILITY

Question. I remain concerned about reserve forces equipment compatibility with the active components as we modernize our forces. Can you please comment on how we ensure that your respective reserve force remains relevant and deployable?

Answer. Like our active duty counterparts, Air Force Reserve Command (AFRC) is operating an aging fleet. This aging fleet leads to increased Operations and Maintenance spending for maintenance. Like our active duty counterparts, Air Force Reserve Command (AFRC) is operating an aging fleet. This aging fleet leads to increased Operations and Maintenance spending for maintenance. This, compounded with a decreased modernization budget for new equipment and modification of old equipment, will lead to additional challenges in the near future.

AFRC is responsible for providing the war-fighting Commander in Chief (CINC) with the most capable forces possible. We need to continue a robust aircraft mod-

ernization program. Primarily due to funding constraints, our gaining Major Commands (GMAJCOMs) have been unable to adequately meet both Reserve and active requirements. Congress has traditionally provided AFRC with additional National Guard and Reserve Equipment Account (NGREA) monies to augment these equipment upgrades that our GMAJCOMs have been unable to provide. Unfortunately, NGREA funds have decreased from a high of $50 million to the current level of $5 million. Our combat aircraft are fast becoming dated and in need of modernization. NGREA has, in the past, permitted AFRC to have a solid modernization program. Without NGREA, it is safe to say that the Reserve would not have a force with the capability it has today.

Without NGREA, key Reserve modernization programs are falling below the current funding line.

ROTATION POLICY

Question. I understand the Air Guard has shifted to a 90-day rotation policy to reduce perstempo. Does the Air Force Reserve have a similar policy and if so, how is this working?

Answer. The Air Force Reserve is an active and enthusiastic participant in the Expeditionary Aerospace Force (EAF). The Aerospace Expeditionary Force rotates equipment and personnel on a 90-day rotation. When tasked, Air Force Reserve Command (AFRC) policy requires members to serve in country a minimum of 15 days, and tours in excess of this 15 days must be accomplished by volunteers. This rotation of personnel means the maximum required commitment of members to serve is 19 days, including travel time. We have used this rotation schedule throughout EAF Cycles 1 and 2 with great success. During EAF Cycle 1 the AFRC deployed 14,249 personnel and during Cycle 2, 12,425 personnel. We believe this is a win-win situation for the Reservist, their employers and the family.

QUESTIONS SUBMITTED BY SENATOR CHRISTOPHER S. BOND

NATIONAL GUARD RESERVE EQUIPMENT ACCOUNT

Question. It is my understanding that the percentage of funding the Active components devote to their respective Reserve components varies from Service to Service.

Can each of the Reserve Chiefs (Air Force Reserve, Marine Corps Reserve, Naval Reserve, Army Reserve) recount for me the impact, be it negative or positive, of DOD's decision to reduce the size of the National Guard Reserve Equipment? Are your respective Active components providing adequate resources for you to perform your mission?

Answer. Like our gaining major commands (GMAJCOMs), Air Force Reserve Command (AFRC) is responsible for providing the war-fighting CINC with the most capable forces possible. We need to continue a robust aircraft modernization program. Primarily due to funding constraints, our GMAJCOMs have been unable to adequately meet both Reserve and active requirements. Congress has traditionally provided AFRC with additional National Guard and Reserve Equipment Account (NGREA) monies to augment these equipment upgrades that our GMAJCOMs have been unable to provide. Unfortunately, NGREA funds have decreased from a high of $50 million to the current level of $5 million. Our combat aircraft are fast becoming dated and in need of modernization. NGREA has, in the past, permitted AFRC to have a solid modernization program. Without NGREA, it is safe to say that the Reserve would not have a force with the capability it has today.

Without NGREA, key Reserve modernization programs are falling below the current funding line.

QUESTIONS SUBMITTED TO LIEUTENANT GENERAL RUSSELL C. DAVIS

QUESTIONS SUBMITTED BY SENATOR TED STEVENS

SUPPORT OF OUR NATIONAL MILITARY STRATEGY

Question. During this year, the National Guard will deploy more personnel throughout the world in support of our national military strategy than anytime in our nation's history. What are your major challenges in sustaining that level of support throughout the remaining months of the fiscal year?

Answer. For the Army National Guard, short term "surge" manpower capability in the form of "Active Duty for Special Work" (ADSW) to coordinate the reception, staging onward movement and integration of National Guard troop rotations over-

seas is critical to achieve the maximum readiness value from the training dollars already invested. Full time manning to adequately plan for and coordinate the execution of Overseas Mission Support. Current manning levels are inadequate and cause needless confusion, additional staff work and overburdens the remaining staff members.

For the Air National Guard, there are three major readiness challenges we are currently facing. The first challenge is three-level school availability. The ANG has experienced a shortage of 3-level technical schools during the past two years, due in part to the unforeseen increase in non-prior service accessions. This shortfall has created difficulty in achieving 3- and 5-level manning goals. This shortage further affects deployments, as most career fields require a 5-level for overseas support.

The second challenge is manpower shortages. The ANG recently accomplished a complete review of both our full-time and traditional guard manpower requirements needed to support the AEF now and well into the future. The results of this effort validated a requirement of 2,048 additional full time manpower resources. Historically the ANG has been resourced as a Respond (Cold War) force with limited full time manpower to operate and maintain facilities, repair aircraft/equipment, and train the drilling force. Now with a formalized AEF construct and increasing support requirements, the ANG must begin to be resourced properly for both training and increased Optempo. Thus far we have funded 1,151 of our requirement through internal ANG offsets and through funding and support received from the Air Force during the POM process, leaving an unfunded requirements of 897 full-time positions. Increased Optempo and aging aircraft and weapon systems are driving increased maintenance workloads to ensure aircraft and systems are available for training and deployment. Our review also identified shortfalls in infrastructure and communications, additional air traffic control and combat communications operators, additional full time aircrew and crew compliment adjustments in the airlift and air refueling mission areas. We are continuing our efforts to obtain the balance of the funding and end strength required.

The third challenge is depot quality and timeliness. This continues to be the top issue for Logistics. Constantly shifting schedules and consistently unreliable output dates and products from the depots have caused disruptions and difficulty in meeting other scheduled maintenance. This has been an enormous problem for the KC–135 and C–5 fleets. Twenty nine percent of the ANG KC–135 fleet is in depot status. Less than half of the ANG C–5 fleet is available for unit missions. In additional to lack of availability, depot quality is a serious concern for most aircraft types. Of particular concern are recent incidents of F–100–PW–220 engines with tooling found inside depot-produced Low Pressure Turbine Modules and perhaps other components in our single-engine F–16s. This is extremely serious, as the ANG has experienced two-engine related Class A mishaps since August within our F–16 fleet. Assessments of our field LGs indicate there could have been more had not Jet Engine Intermediate Maintenance personnel identified engine abnormalities during ground operations.

DIFFICULTIES IN SUPPORT OF MISSIONS

Question. From a National Guard perspective, what is the difficulties in supporting such a broad spectrum of federal and state missions and civil support matters?

Answer. With the present Army National Guard force structure we are meeting our primary and secondary missions for the federal or "DOD community" and governors of the states and territories. Any reduction in the existing force structure will have a direct impact on meeting the broad spectrum of missions, especially the missions in support of Military Support to Civil Authorities (MSCA) operations requiring unique capabilities only found in the military are removed due to force structure reduction. This impacts the states as well as surrounding states that utilize those capabilities. At this time the greatest impact on the National Guard is the lack of authority for the Title 32 AGR and Technician personnel to support Non-DOD Federal (i.e. Wild land Fire Fighting) and state (i.e. State Active Duty (SAD) missions in their full-time federal status. As it exists in Congressional Appropriations Language, Title 32 Active Guard Reserve (AGR) personnel are prohibited the authority to perform federal or state duty during Disasters Man-made or Natural reduces the National Guards within the state or across state lines as directed by the Governors of the States and Territories. This has grave implications since most key leadership positions within the National Guard units are usually filled by full-time members, who are most likely, the most skilled in their military roles and functions within the unit. This decreases the response and skill-base required to respond in a timely manner to the ever-increasing requirement to support not just the strict war-fight-

ing missions but also the "domestic disaster response and homeland security" missions that are continuing to be an increasing integral part of the National Security Plan.

For the Air National Guard, PERSTEMPO is the primary difficulty. The AEF has become the primary driver for ANG manning levels, however there are still numerous deployments that are still required to sustain the war-fighting capability. The ANG has looked to re-engineering to put the fulltime and traditional manpower in the AEF-driven high-PERSTEMPO jobs. For the most part, re-engineering will fix most of the shortfalls but there are still some problem areas. Most notably is the Low Density/High Demand manpower shortfalls within the Combat Rescue units. The three ANG Rescue units do not have enough Primary Authorized Aircraft or manpower to sustain the current level of participation without relief. Their AEF commitment may need to be reduced. ANG Ranges and Combat Readiness Training Centers are currently funded at 78 percent of authorized strength and are not able to support many of the requirements of their customers. This has impacted directly on the ability to support both daily training capability for AEF preparation and deployments for AEF spinup. There has been an increased emphasis on night operations over the last several years, but daytime requirements remain. This has forced ANG Ranges to operate on a two shift schedule with no additional manning.

These are just two examples of our personnel being tasked beyond their availability. While state missions and civil support matters are not a daily concern, personnel must be available to meet their state commitment whenever needed. The historical State mission many times becomes Federal when a FEMA emergency declaration is made.

RECRUITING RESOURCES

Question. As the number of active duty personnel transitioning to the National Guard has decreased, your recruiting requirements have increased. Does the National Guard bureau have the recruiting resources it needs?

Answer. The Army National Guard does not have the resources necessary to carry out its recruiting and retention mission. In order to maintain our end strength mission of 350,000 soldiers in support of the National Military Strategy, the Army National Guard requires additional funding in Advertising, Recruiter Support, and Incentives. We are also experiencing a manpower shortage within our full-time recruiting force.

Additional advertising funding is necessary for the Army National Guard (ARNG) to penetrate markets previously neglected or overlooked. The goal is to improve the quality of the ARNG force within Test Score Category (TSC) I–IIIA personnel to meet the Total Army Quality Goal of 67 percent; and 90 percent Tier I (high school degree graduates and above). Simultaneously, our goal is to increase the diversity of the force to more accurately reflect the general population. We currently have an unfinanced requirement (UFR) for recruiter support of $18.384 million for fiscal year 2002. This includes efforts to recruit and retain officer, warrant officer, and enlisted personnel in the ARNG. Other programs will target leaders at the Company and Battalion levels to decrease attrition and increase retention of soldiers. Also, under development are special programs directed at diversity. This is a priority for the ARNG.

GSA vehicles support currently has a UFR of $5.478 million. The increased cost of GSA vehicles is a result of higher fuel costs and the increased travel requirements related to the increased recruiting and retention mission.

The incentive (bonuses) UFR for fiscal year 2002 is $20.051 million. The UFR is the result of an increase in the number of non-prior service (NPS) enlistment's needed to meet the end strength goal. The bonuses are needed to attract quality applicants to the ARNG while competing against other services and the civilian sector. A residual effect of an increase in NPS enlistments is anniversary payments for the member.

We are experiencing a shortfall in full-time manning due to the "cap" on the ARNGs Active Guard Reserve (AGR) force. Unlike other services, for the ARNG to plus-up recruiting, it would come at the expense of full-time unit personnel. This movement of AGR personnel would adversely impact unit readiness. Hence, this option is not in the best interest of the organization. In lieu of that, we have been effectively utilizing Active Duty for Special Work (ADSW) personnel to augment the full-time recruiting and retention force. These ADSW personnel are current ARNG members hired as temporary help.

We have additional concerns addressing our shortage of company grade officers in the ARNG. While we are working with Cadet Command to increase the number of second lieutenant accessions through the Reserve Officer Training Corps (ROTC),

an obstacle we face in commissioning enlisted soldiers as lieutenants through our Officer Candidate Schools is the automatic loss of the Student Loan Repayment Program (SLRP). Section 16301 of 10 United States Code makes SLRP contingent on enlisted service, and therefore, any initiative to authorize repayments for service in a commissioning program or as an officer would require a statutory amendment.

Last year, the Air National Guard Recruiting and Retention Branch was authorized an additional sixty-five positions to be distributed over a three year time frame. Many of these positions will be placed on active Air Force installations to try and capture the departing airmen.

GUARD MILITARY CONSTRUCTION

Question. I am concerned that the department under-funds guard military construction because they know the Congress will add funding for these projects. Has your ability to ensure your requirements are adequately addressed through the future years defense plan and other budgetary processes improved?

Answer. The Army is severely underfunded for its MILCON, and its Sustainment, Revitalization, and Modernization of existing real property. The Army has a valid process for determining ARNG requirements. Nevertheless, in fiscal year 2001, $59 million was programmed for ARNG MILCON, which is less than ten per cent of the requirement, and ARNG received $224 million for sustainment, revitalization and modernization, which is about 50 per cent of the sustainment requirement of the Army's Installation Status Report (ISR).

In previous years, the AF would fund a portion of our MILCON projects, and the ANG would present an unfunded priority list that would partially be funded by Congressional adds. Together, the AF funds and the Congressional adds would equal our historic funded position. That is no longer a viable process. It was degraded by language in the fiscal year 2001 Authorization Bill that constrained us to strictly a funded FYDP. The ANG maintains that the funded portion of the FYDP does not adequately represent our requirements. As this was an fiscal year 2001 change, it is too soon to predict the success of adequate funding through the FYDP and other budgetary processes.

GUARD EQUIPMENT

Question. I remain concerned about guard equipment compatibility with the active components as we modernize our forces. How do we ensure that the guard remains relevant and deployable?

Answer. The Army's ability to execute full spectrum operations in support of the National Military Strategy, Joint Strategic Capabilities Plan and the war fighting Commander in Chiefs is largely contingent on bridging the interoperability gap between analog and digitally equipped units as we transform. The Army must identify and resource the minimum essential digital capabilities required to maintain command, control and situational awareness across the entire force. Less modernized units must be fully capable, sustainable and interoperable.

The ANG always seeks to acquire and maintain the most capable and effective aircraft fleet possible. This desire is unfortunately sometimes constrained by fiscal and operational realities imposed upon us from external sources. However, there is an on-going list of aircraft modernization requirements to ensure the ANG is able to continue to meet its commitments. That list is continually being worked and funded whenever possible. The Air National Guard is a full and equal partner in every phase of the Air Force Corporate Budget Process. We have representation on every panel as well as the Air Force Group, Air Force Board, and the Air Force Council.

Funding appropriated within the National Guard and Reserve Equipment Account enables the National Guard to procure items which are critical in nature. Both Army and Air National Guard components appreciate the flexibility inherent in the NGREA.

TOUR LENGTH POLICY

Question. With the shift to putting the Army Guard in the regular Bosnia rotation, has the National Guard Bureau and the Joint Chiefs of Staff considered reducing the tour length policy in this area?

Answer. The Army National Guard has been following the Chief of Staff, Army rotational policy guidance of 179 days in theater for Balkan operations. The Army along with the Army National Guard has discussed shorter rotations such as 120 days or 90 days for the Balkans. The Army National Guard currently deploys units on shorter rotations to South West Asia and has reduced rotational lengths for lawyers, medical and aviation personnel. Discussion continues between both staffs on

the feasibility for shorter Balkan rotations and the potential impacts on units, families, employers, and communities. Funding is also a consideration, such as added transportation requirements for personnel and equipment and training site usage. As the Guard takes on more of a role in the Balkans, it will continue to work towards better rotational solutions that will reduce Personnel Tempo (PERTEMPO) and OPTEMPO (Operational Tempo) for all components of the Army.

QUESTIONS SUBMITTED BY SENATOR CHRISTOPHER S. BOND

FULL-TIME MANNING

Question. General Davis, it's evident that the operations tempo of recent years has placed an increased burden on not only our active forces but our Guard and Reserve forces as well. It is reported that again this year one of the top priorities for the National Guard is the need to increase the number of full-time personnel. I understand many Army National Guard units stand at on 38 percent of their required manning, down from 50 percent just 12 years ago. What are your full-time manning requirements and how does this shortage impact readiness and the ability of the Guard to perform its state and federal missions?

Answer. The Army has validated a full-time support manpower requirement of 41,321 Active Guard Reserve (AGR) and 42,329 Military Technician personnel for the Army National Guard. Based on Army personnel readiness metrics and mobilization deployment scenarios, there is a minimum acceptable level of manning necessary to maintain required levels of readiness. For the Army National Guard (ARNG) this minimal level of support equates to 30,402 AGR and 29,329 Military Technician personnel, or approximately 71 percent of the full-time support requirement.

Currently, ARNG full-time support levels are well below that 71 percent level. The fiscal year 2001 Appropriations and Authorizations Acts provided funds and authorizations for end strengths of 22,974 AGR and 24,728 Military Technician personnel, for an overall level of approximately 57 percent of requirements.

However, we resource units using a first-to-fight, first-resourced methodology. Prior to fiscal year 1996, the ARNG was able to resource all its units at a minimum of 50 percent with our highest priority units manned between 70–75 percent of full-time support requirements. Due to competing priorities for limited resources, our later deploying units today are resourced at only 38 percent of their full-time support requirements while our highest priority units are resources only at approximately 65 percent.

Full-time support personnel are critical enablers in ensuring ARNG readiness. They provide; administrative, payroll, supply, training, maintenance and recruiting support at unit level. With a work force manned well below the level needed to maintain minimum required readiness levels, the impact is an erosion of readiness to complete both the federal and state ARNG missions. Many unit level commanders have attributed a decline in readiness to inadequate levels of full-time support.

ARMY AVIATION MODERNIZATION PLAN

Question. General Davis, over the last 10 months we've heard alarming reports about the health of our Army National Guard Aviation resources. I understand there is a massive shortage of utility, attack and reconnaissance aircraft due to the retirement of legacy aircraft and the lack of replacements over the upcoming years. Many aircraft in the Army Guard have been grounded because of safety issues and this severely affects the Guard's ability to perform both state and federal missions.

I have a letter from the National Governors Association citing a shortage of more than 300 UH–60 Black Hawk helicopters that also states that more than 600 of the Guard's UH–1 Huey helicopters (75 percent) are usually not working due to mechanical failures. It's almost unbelievable that the Army's modernization plan calls for only 10 helicopters per year to be procured through fiscal year 2007. If my math is correct this will add up to 60 aircraft over 6 years and with a requirement for upwards of 300 aircraft it will take more than 20 years to resolve the shortfall. And this does not begin to address our attack helicopter needs.

How is the current state of affairs in Army Guard aviation impacting readiness, retention, and safety, and your ability to meet state and federal mission requirements? And are you getting any signals from Army or the Department of Defense that this situation is going to get the type of priority necessary to turn this sad state of affairs around?

Answer. Please allow me to refer this question to General Schultz for a more detailed explanation.

General SCHULTZ. The full details of the revised 2001 Army Aviation Modernization Plan (AAMP) are not yet approved by the Chief of Staff Army (CSA) nor released to the ARNG. However it is certain that there will be continuing significant short and long term impacts on our ARNG aviation units and their parent States.

In the short term the repeated grounding of the Army National Guard (ARNG) Vietnam-era AH–1 and UH–1 aircraft, combined with the pending full retirement of both fleets (AH–1 in fiscal year 2001 and UH–1 in fiscal year 2004), severely limits both our unit and individual aviator readiness. In addition, units with these older aircraft are no longer deployable to meet Federal contingency requirements, and also have a rapidly declining ability to respond to State emergencies.

In the long term the Army's current procurement and cascade rates (active to ARNG) of modernized aircraft are not adequate to make up the differential. The current Army buy of new UH–60 utility helicopters is 10 per year, at which rate will take well over twenty years to bring ARNG aviation units back to near full fill. Also these slow procurement rates will not be mitigated to any significant degree by movement of UH–60's from the active Army to the ARNG, with present Army planning moving only about 6 UH–60 aircraft between now and the end of fiscal year 2007. The Army has repeatedly stated it's desire to accelerate the procurement of UH–60 helicopters for the ARNG, but does not currently have sufficient resource allocations to accomplish this.

NATIONAL GUARD RESERVE EQUIPMENT ACCOUNT

Question. The National Guard Reserve Equipment Account, designed to supplement Guard and Reserve shortfalls in annual funding is gradually being eliminated. I understand this initiative was dependent upon the Active component providing a greater share of annual appropriations to the respective Guard and Reserve components. In your view, has the gradual elimination of NGREA funding worked out as planned? Is the Active component providing you adequate resources for you to perform your wartime mission?

Answer. For the Army National Guard, the decline in NGREA funds has not been completely offset by an increase in the P1R. The P1R continues to reflect the Army's requirements and while it has benefited several programs such as ADRS, other programs are not sufficiently funded. The ARNG Top 25 list of unfunded equipment requirements reflects some of the validated requirements that are not adequately funded by the P1R.

The NGREA benefits the ARNG by providing discretionary funds to procurement to support the ARNG priorities versus the P1R, which is developed, based on the Army's priorities. NGREA provides the capability for short-term readiness solutions. NGREA funds must increase annually because of inflation costs to maintain the current rate of procurement.

Over the POM 02–07 $1.5 billion are devoted to ADRS Phase I & II equipment procurement. ADRS only supports new activations/conversions of CS and CSS units. Overall other programs have decreased and only ADRS is fully funded.

Army fielding programs do not always completely include the ARNG requirements. There are many examples of Army procurement not even addressing the ARNG (M88A2, Wolverine, M1A2, M2A3, M3A3, etc.) The Hydraulic Excavator or HYEX (fiscal year 2001) is an example where NGREA funds had to be used to complete the ARNG requirement. If these funds had not been available the ARNG would have been left with a shortfall of 7 systems with no new procurement planned after the Army procurement closed in fiscal year 2002 and no potential to fill these with cascaded equipment for 10 to 15 years. Most program shortfalls are too expensive to address with the current marginal NGREA funding.

The Army decision to delay procurement of FMTVs for the ARNG to fill other requirements has delayed significantly the ARNG's ability to eliminate obsolete trucks. Currently the fleet is aging faster than it can be replaced. Recapitilization will have minimal benefit towards this problem.

The current P1R slight upward trend over the last few years has not off set the void left by the low procurement of the nineties. The current POM is focused on Army priorities, which have marginal effect on the ARNG's older equipment. The anticipated cascade of modern equipment has not materialized. Funding for programs like Limited Division XXI are expiring before the program is complete. Over the last couple of years NGREA funds have been used to fill shortages in MTVs, HEMTTs, SINCGARS radios, simulators, and night vision devices that will have an immediate positive impact on readiness. Without these funds or other congressional adds these shortfalls could not have been filled for many years. Realistically the P1R is still inadequate as reflected in the UFRs generated in each POM year. With-

out an increase in NGREA funds the current readiness rates will decline due to equipment shortages, which impact capability, training and retention.

For the Air National Guard, although the "big ticket" items, such as aircraft and major weapons systems, have migrated to the AF procurement appropriation, the NGREA account has been instrumental in our efforts to modernize ANG aircraft and keep us fully relevant to today's Total Force Military. Using NGREA, we have focused on four key areas: precision strike, 24 hour operations, information dominance, and enhanced threat survivability. Using NGREA and existing AF funding we designed an F–16 modification program called Combat Upgrade Program Integration Details (CUPID) that dramatically increased the combat capability of the entire CAF F–16 Block 25/30 fleet and saved over $100 million in the process. CUPID coupled with another GREA success program, the Litening II targeting pod, has allowed our F–16 units to perform the full spectrum of day and night combat operations including Precision Guided Munitions. The Situation Awareness Data Link (SADL) another of many fine examples of NGREA successes. We were also able to field Fighter Data Link on the ANG F–15 fleet using NGREA funding which allows passing information between aircraft and aircraft to ground without talking. FDL is the true F–15 force multiplier and, again, using NGREA we are able to maintain full combat capability in the ANG F–15 fleet. In the area of 24 hour operations, the ANG has led the way in fielding Night Vision Imaging Systems across the CAF A–10, F–15 and F–16 fleet. These NVIS systems are now the AF standard yet were initially fielded using NGREA funding. We have made great strides in modernizing our 40+ year old KC–135E tankers through the ongoing KC–135E to R reengining program. We have also begun to field C–130 Cockpit Armor to allow our C–130 units full protection of the aircrew during in theater rotations. The flexibility NGREA funding gives us has allowed the ANG to field commercial off the shelf solutions faster and cheaper than otherwise able. These combat enhancements have been invaluable in our efforts to modernize our fleet and support global taskings.

MILITARY CONSTRUCTION

Question. The current state of Army National Guard Military Construction (MILCON) and Real Property Operations and Maintenance (RPOM) activities suffers from an alarming backlog of over 1,300 unfunded MILCON projects representing a cost of $6 billion and an RPOM sustainment requirement of $565 million. These deficiencies must certainly have a devastating effect on Army National Guard training and readiness. How is the Guard dealing with this alarming set of statistics and what is the impact on recruiting, retention and the ability of the Guard to perform their state and federal missions?

Answer. I agree that we have a challenge. Shortages in MILCON/RPOM funding have prevented the Guard from revitalizing its facilities in a timely manner. Who wants to join an outfit where the unit practices for all sorts of contingencies in undersized, 1950s era facilities that have never been maintained, and look like junk? Although the Army National Guard is still a trained and ready force, overtime, ill-maintained facilities hamper training and adversely effect retention. Soldier morale is negatively impacted by operational requirements that are more difficult to meet, and take a significantly longer time to accomplish in undersized, over aged facilities that impede operations rather than facilitating them. For example, after training, soldiers are often forced to wash down their vehicles with a garden hose. Since this takes so long, training must be curtailed earlier in the afternoon, but soldiers still do not get home until late at night. Since this impacts the family, the spouse discourages the soldier from staying in the Guard.

To improve the condition of all the facilities, the Army has developed an Army Facilities Strategy that includes the Army National Guard. If funded, the Army Facilities Strategy will improve one third of the readiness centers, all of ARNG's surface maintenance facilities, all organizational equipment parking, and all of ARNG's training classrooms over the next ten years. This is a major undertaking that will significantly improve the condition of ARNG facilities, if funded. Implementing the Army National Guard Division Redesign Study will modernize facilities for the conversion of 12 brigades to Army Combat Support Military Construction effects Guard training and readiness and Combat Service Support missions. These programs will have a direct, positive impact on ARNG training and operational capabilities.

COMMUNICATIONS EQUIPMENT (SINCGARS RADIOS)

Question. The Adjutant General of the State of Missouri, Major General Havens, wrote me last month strongly urging me to do all I can to secure funding for additional SINCGARS radio sets, which as you know are essential for enabling ground

forces to communicate with each other. He noted that the ability of Missouri soldiers to communicate is constrained by obsolete equipment. Units from Missouri which are part of the 35th Infantry Division are scheduled to deploy to Bosnia for a Stabilization Force rotation in 2003.

I'm told the shortage of SINCGARS radio sets is not just a Missouri problem and that other Army National Guard Divisions are still operating with Vietnam-era, VRC–12 radio sets which operate without secure voice and data capability. How does this shortage of SINCGARS radios impact the Guards ability to perform their required mission?on recruiting, retention and the ability of the Guard to perform their state and federal missions?

Answer. The continued use of the VRC–12 series radio when interacting with active component units will bring communications operations "down to the lowest common denominator of capability." Single Channel Ground Airborne Radio System (SINCGARS) equipped units (transmitting to the VRC–12) will have to switch off the frequency hopping mode, use single channel, and accept a level of risk where jamming and or listening in by enemy electronic warfare capabilities is likely.

SINCGARS is an important part of modernization that is long overdue in the communications realm of the Total Army. Ongoing cascading will complete the fielding of the three ARNG divisions through 2002, with the remaining five divisions (27,667) currently scheduled for fielding through fiscal year 2004.

SINCGARS features digital data capability, integrated communications security (COMSEC), an enhanced waveform that improves the performance of voice and data, less weight, smaller size, and less cost to sustain. All of these highly advanced capabilities are now needed to redress the obsolescence problem of the VRC–12 series radios. The VRC–12 radio only operates one channel at a time, typically stays on single channel up to 24 hours, and operators must conduct a manual frequency and COMSEC change. This affords an enemy equipped with Warsaw Pact era electronic warfare hardware an excellent chance of finding the signal, jamming, or listening in and collecting intelligence data that could be used against U.S. forces.

The most significant improvement SINCGARS has over the VRC–12 series radio is the ability to frequency hop (FH). In this mode the SINCGARS literally hops over 2,320 frequencies at 100 hops per second and allows virtual jamming-free transmissions. With SINCGARS it is virtually impossible for an enemy to match the hopping effect, and clearly listen in on message traffic. Even attempts to jam large blocks of frequencies are ineffectual, as the quick hopping over 2,320 frequencies (twice the number of VRC series radios) will ensure units have plenty of open frequencies for their radios to transmit over.

If fielding beyond the enhanced separate brigades and the first three divisions is not funded the five remaining divisions and a number of non-divisional units will be unable to execute required missions, deployments, and or other interactions with active component units. Units retaining VRC–12 series radios will continue to perform state missions not requiring the advanced capabilities of SINCGARS radios. However, VRC–12 equipped units will continue to be plagued with high maintenance costs and lack of repair parts as well as remaining a challenge to equip for deployment.

QUESTIONS SUBMITTED BY SENATOR ROBERT C. BYRD

HART-RUDMAN

Question. The Hart-Rudman Report, page xiv, states; "We urge in particular that the National Guard be given homeland security as a primary mission, as the U.S. Constitution itself ordains."

Major General Allen Tackett and other Adjutants General believe that Homeland Security should be one of the missions of the National Guard, but not the only mission. The Guard should still maintain its warfighting missions.

General Davis, do you agree with the Hart-Rudman recommendation?

Answer. I agree with the Hart-Rudman recommendation that homeland security be a primary mission of the National Guard. Not surprisingly, the National Guard is best equipped to handle the Homeland Security Mission. For 364 years, the National Guard has been the first line of defense for both state and nation. As demonstrated throughout history, the National Guard has proven its ability to perform both domestic and warfighting missions. We should maintain our warfighting mission and the Adjutants General of the several states and territories agree with that position. We also support President Bush's vision for an expanded National Guard role in the homeland security mission.

HOMELAND SECURITY

Question. What additional resources would the National Guard Bureau require in order to fulfill the broader mission of Homeland Security, and in particular, please comment on the National Training Center for Homeland Security (NTC–HLS) being developed at Camp Dawson, West Virginia? (General Davis has been briefed on the concept of the NTC–HLS and the Memorial Tunnel, the Robert C. Byrd Regional Training Institute, and proposed Integrated Special Operations Training Facility (ISOTF).)

Answer. The Chief, National Guard Bureau has completed the congressionally directed Feasibility Study which reviews and highlights the capabilities of both Camp Gruber, OK and Camp Dawson WV as a WMD and counterdrug training center for the military and to the state and local first responder community. The study discusses the proposal and capability of each of the facilities mentioned particularly regarding Camp Dawson. Collective and individual institutional training for the WMD CST members has been and continues to be conducted at Fort Leonard Wood, MO. The National Guards Civil Support Teams and their members also attend WMD type training concurrently with first responders at various locations. Additional locations used for more focused technical training within their states and areas of responsibility of WMD CSTs are:

—Dugway Proving Grounds, Utah (Collective—Bio emphasis)
—Aberdeen Proving Grounds, Aberdeen MD, (Mobile Analytical Laboratory (MALS))
—Center for National Response, WV (confined space)
—FEMA National Fire Academy, Emittsburg, MD (HAZMAT & Emergency Preparedness)
—DoJ Center for Domestic Preparedness, Anniston, AL (Civil Domestic Terrorism)
—Energetic Materials Research & Testing, NM (explosives)
—National Center for Bio-Med Research & Training, LA (bio)
—National Exercise, Test & Training Center, NV (explosive, nuclear/rad)
—National Emergency Response & Rescue Training Center, TX (emerg & rescue)

As you can see, there are a variety of locations that WMD training is currently being conducted. Using this "menu" of training areas, leverage existing expertise from the nations "experts" and significantly enhances the capabilities of the CSTs.

Question. Do you concur with the recommendation to the Senate Armed Services Committee from General Peter Pace, Commander of the U.S. Southern Command, that the illicit drugs flooding American should be considered a weapon of mass destruction? Should counterdrug efforts be included as a part of Homeland Security?

Answer. Illicit drugs flooding America can have the same or similar impact as a weapon of mass destruction. To explain this, the answer can be divided into three question-and-answer responses.

Do illegal drugs cause "mass destruction" on a society?—The answer is "they could be." One destructive effect is financial. The Office of National Drug Control Policy spent over $17 billion for both 1999 and 2000 fighting the drug problem, and will spend an estimated $18 billion for 2001. This does not include the tax dollars spent on drug-induced crime such as murder while influenced by drugs, or drug related health costs such as emergency room visits. Nor does this reflect the amount of money lost in the illegal money transactions by narco-traffickers. In addition, drug addicts often are homeless and consume a disproportional amount of public services.

The social effect is obvious. Criminals whose offenses are drug related (beyond just being in possession of drugs) fill many of our jails, as crime under the influence of drugs can result in murder and other assault crimes. Meanwhile, increased drug addiction brings an increase in property crime. A 1998 Bureau of Justice statistics study found that 33 percent of state and 22 percent of federal prisoners said they committed their current offense while under the influence of drugs, and about one in six of both state and federal inmates said they committed their offense to get money for drugs.[1] In addition, major criminal organizations can produce more revenues from trafficking illegal drugs than from most any other criminal activity, giving them tremendous influence and power, but without bringing significant attention to themselves. Finally, physical damage to the individual from illegal drugs can be significant and have long-term effects. This decreases the capability of our "white collar" and "blue collar" work force, affecting our entire future.

Are drugs currently being used as a weapon of mass destruction against the United States?—In the big picture, the current answer appears to be "no." Currently,

[1] Mumola, Christopher, "Substance Abuse and Treatment, State and Federal Prisoners, 1997" (NCJ–172871), Bureau of Justice Statistics, 5 January 1999.

"money" still seems to be the motivating factor for the huge influx of drugs into the United States. Yet, even if the drug flow is not currently intended as a weapon, its devastating effects ("mass destruction") are the same.

Can illegal drugs be effectively used as a weapon of mass destruction?—The answer is "yes." Illegal drugs can be used as effectively as an "indirect" strategy, as military theorist and author B. H. Liddell Hart would call it. The greatest example of this occurred in China. Britain forced China to open itself to opium trade throughout the late 18th to early 20th centuries. During this time opium use resulted in a greatly weakened China, and allowed for the West and other countries to exploit China for many of its resources, especially silver—the currency of the opium trade. Japan employed illegal drugs as a strategy against China during the formers occupation of Manchuria prior to World War II. The Japanese and Chinese had been enemies for centuries. Aware of the social destruction that drugs cause, as well as the devastating role that opium had played in China's history, the Japanese distributed opium, heroin and cocaine along the Chinese coast when they took control of Manchuria in 1931, earning Japan $300 million per year (the equivalent of 3.488 billion in 2001). The strategy not only helped finance Japan's war machine, but the Japanese planners thought that it would make the subsequent occupation of China much easier because drug-consumption would reduce the combat effectiveness of Chinese troops. It took the iron fist of Communism to finally pull China out of its drug-ridden circumstances.

History has shown that drug trafficking, as a strategy of nation against nation, is a proven and viable weapon. Drugs' slow, degrading effects can damage any country. While some countries are very susceptible to drug abuse—making them more vulnerable to a drug trafficking strategy—other countries are well suited to trafficking drugs. It is no surprise that the United States is definitely one of the drug-vulnerable nations, but what many do not realize is that China is perhaps the most capable of putting a drug trafficking strategy into practice.

HOMELAND SECURITY MISSION

Question. What increases in National Guard Force Structure would you recommend to meet the Homeland Security Mission?

Answer. The full answer to this question depends on what programs are included within the mission. The National Guard presently performs several missions which, in my judgement, should be included under homeland security. Those missions include the counterdrug program, aerial defense of the continental United States, domestic support to civil authorities and the weapons of mass destruction program to name a few.

The weapons of mass destruction program presents the most pressing need for force structure changes. Presently, only 32 teams are authorized. The National Guard supports the Congressional intent to provide a WMD CST capability in each of the states and territories. To do so would require 23 additional teams, with a total of 506 full-time soldiers and airmen and associated equipment. Additional manpower is also needed at the National Guard Bureau to properly perform the recently assigned responsibilities as WMD program manager. Additional force structure will also be required if the National Guard is assigned responsibility for the National Missile Defense program.

COUNTERDRUG MISSION

Question. As it relates to the Counterdrug mission, what additional resources are needed to maintain and increase the capabilities of the National Guard-funded state counterdrug programs such as the one in West Virginia? (The West Virginia program requires $3.5 million to execute an effective program, yet the fiscal year 2002 National Guard Budget for state plans funding declines to $1.34 million for fiscal year 2002, a cut of more than fifty percent.)

Answer. Based on historical program execution, and realized and projected DOD pay and allowance increases (8.7 percent in last two years, similar raises projected for fiscal year 2002), the program would need an additional $40.7 million in fiscal year 2002 to conduct operations at current fiscal year 2000–2001 levels of effort. Resource requirements are based on valid support requests from law enforcement agencies for counterdrug operations, as provided by each of the 54 states and territories. This amount would maintain the program below the 4,000 maximum personnel limit authorized by Congress. To increase the capabilities of state counterdrug programs beyond current levels of effort, additional resources beyond $40.7 million would be needed.

NATIONAL GUARD COUNTERDRUG PROGRAM

Question. It is my understanding from my discussions with MG Allen Tackett, the West Virginia Adjutant General that the unique aspect of the National Guard Counterdrug program as opposed to other DOD involvement is that it focuses on three areas: supply reduction, a high emphasis on demand reduction, and substance abuse programs for Guard personnel. What is your assessment of the program?

Answer. The National Guard Counterdrug (NG CD) program is unique to other DOD programs in the arena of counterdrug efforts. First, the National Guard (NG) provides counterdrug support under the auspices of Title 32 U.S.C., which puts them under authority of their state's governor. This enables the NG to provide a wider range of services than is possible for Title 10 (active component) forces within the continental United States. NG personnel work for their state governor to support state and local law enforcement agencies (LEAs), as well as federal LEAs to interdict drug trafficking. This support can include investigative case and analyst support, linguists, communications, engineer, cargo inspection, logistics and transportation support, training for LEAs, and air and surface observation of illegal drug activities. (A 2000 survey of NG supported LEAs showed a remarkably high satisfaction rate in all categories.) The NG also supports federal LEAs outside the United Sates via air intelligence and reconnaissance operations. In addition, the NG CD program is a fulltime program, thereby permitting NG personnel to become specialized in counterdrug interdiction—who go through special training to prepare for counterdrug operations within the United States. Finally, most interdiction missions provide NG personnel with military training (in the above-mentioned skills) that enhances, or is in addition to, their Military Occupation Specialty (MOS)/Air Force Specialty Code (AFSC) wartime training conducted at their units during monthly drills and Annual Training. This, in turn, provides the NG with better soldiers and airmen. However, the active component units, who may receive some wartime training through temporary counterdrug assignments, are usually deterred from wartime training and preparation while conducting these types of missions.

The NG CD Drug Demand Reduction (DDR) program is one of the greatest assets of the NG CD program. This NG program provides fulltime support to community based anti-drug organizations, and is a leading edge "force multiplier" focusing on assisting schools, parents, and other anti-drug coalitions. As a permanent member of every community across America, and as a partner of the Community Anti-Drug Coalitions of America (CADCA), the NG serves as a powerful catalyst for state and community-based mentoring programs, parenting groups, speakers bureaus, Adopt-A-School, Red Ribbon, and PRIDE projects. The active component does not offer a program of this type. NG personnel become trained in DDR skills, and go out in their own communities to work with their own people in lowering drug demand—a vital role in the counterdrug effort. Many NG state programs even provide camps and schools for high-risk youth to build confidence, skills, and an anti-drug attitude within these young people. NG substance abuse programs use the same drug testing programs and procedures as the active components.

Question. Again from my discussions with MG Tackett, he believes that the National Guard Counterdrug program can play a key role in the broader scope of Homeland Security if given the opportunity and resources and that the missions are complimentary. Do you concur with this assessment?

Answer. The answer is "yes." The National Guard Counterdrug (NG CD) program has skills that could assist in the counterproliferation of Weapons of Mass Destruction (WMD) such as small nuclear devices, and chemical and biological agents. The current skills of the NG CD program could allow it to assist in WMD interdiction efforts with minimal additional training (such as WMD identification).

The NG CD program has a well-established relationship and a very good track record toward assisting Law Enforcement Agencies (LEAs) in interdicting illegal drug smuggling. NG CD skill sets used to support LEAs in drug interdiction could also be used to assist LEAs and other federal agencies in interdicting WMD materials at, or within American borders. Such NG CD skills include investigative case and analyst support, linguists, communications, engineer, cargo inspection, logistics and transportation support, training for LEAs, and air and surface observation. Currently, most American efforts against possible WMD attack are "response" oriented.

The threat of WMD materials being smuggled into or produced within the United States is very feasible. Prior to the millennium celebration, an Algerian terrorist was caught smuggling explosives into the United States at Port Angeles, Washington, with his most likely target being the Space Needle in Seattle. Had this terrorist—who just as well could have had WMD materials—simply solicited the help of drug traffickers to get his explosives into the United States, the infiltration part of the operation would most likely have been a success. Major drug lords may not

want their market damaged by terrorists, but low-level traffickers are looking for money, and may not be quite as concerned about their market. A high financial reward may be all that is required to get top quality traffickers to smuggle weapons for terrorists. The fact that drug traffickers and terrorists can and do work side-by-side (usually for mutual financial benefits) also indicates that the Homeland Security organizations that counter both terrorism and illegal drug trafficking should have close working ties.

FIRST AND EMERGENCY RESPONDER TRAINING

Question. NGB has initiated a study concerning delivering First and Emergency Responder training to the county level across America as a part of the NTC–HLS. When will that study be completed?

Answer. As directed by Senate Appropriation Report 106–298, pg. 34, the Chief, National Guard Bureau conducted a feasibility study and has prepared a response that satisfies the language in law. The Homeland Defense Initiative Feasibility Study for Camp Gruber, Oklahoma and Camp Dawson, West Virginia was not required to nor does it address feasibility of delivering first and emergency responder training to the county level. The proposal to train emergency and first responders as embedded within the above question represents a significant departure from traditional DOD responsibilities.

Question. Do you agree that the National Guard Bureau be provided an Other Procurement Line Item to establish the NTC–HLS and the program be integrated into the Future Years Defense Budget?

Answer. Provision of an Other Procurement Line Item would provide enhanced Congressional visibility and would streamline the operation of the program. It is equally important that Homeland Security be integrated in the FYDP. I support these actions because they would ensure the continuity of funding that is critical to continuing operations. Neither action would detract from our ability to continue to utilize other facilities for specialized training.

NATIONAL GUARD FORCE STRUCTURE AND EQUIPMENT

Question. If the new national defense strategy calls for cuts in the National Guard force structure, how do you plan to make cuts, and will these cuts be based on readiness levels or made across-the-board?

Answer. The Army National Guard uses a process called Total Guard Analysis (TGA) XXI to redistribute force structure due to changes in the National Military Strategy/Quadrennial Defense Review or resulting from the Total Army Analysis (TAA) process.

TGA is an objective and unified National Guard Bureau (NGB) effort to fairly allocate force structure within the States' capabilities, while maintaining a balanced and ready force for federal and domestic missions. TGA is the method that all the Adjutants General agree upon to redistribute force structure.

TGA is a two-step process. Step one utilizes objective, measurable personnel readiness data to produce an "Order of Readiness" list (ORL). Step two involves analysis by NGB's TGA team. Factors used by the team include: the ORL, the percentage of units in a given state by type, the number of headquarters units in a state that provide command and control for other units, the number of units that can be used for either federal wartime or domestic support missions, and the projected demographic changes in a state (population shifts). The outcome of Step 2 is a list of units with low readiness levels and states who are candidates for consideration of growth or re-distribution of force structure. The leadership of the ARNG to make decisions on any necessary force structure cuts uses this list.

The National Security Strategy will define objectives and capabilities that the Services will be tasked to provide. In order to meet them, the Services will re-shape their force structure, in size, types of weapon systems and how those weapon systems will be employed. The Air National Guard will be affected; however we do not know what the full impact of this change will be. As a full spectrum partner we expect to change, just as our active component changes. There will be new opportunities for the Air National Guard including new missions, some of which are being explored. There could be some reductions in force structure. The Air National Guard will work closely with our active component to apply this transition in ways that best utilize the capabilities of the Air National Guard while maintaining a force that is viable, equally trained and equipped.

Question. It is my understanding that the full-time work force of the Army National Guard is at 57 percent of required levels. Are there proposals from the Bureau being developed to improve this percentage?

Answer. The Army has validated a full-time support manpower requirement of 41,321 Active Guard Reserve (AGR) and 42,329 Military Technician personnel for the Army National Guard (ARNG). Based on Army personnel readiness metrics and mobilization deployment scenarios, there is a minimum acceptable level of manning necessary to maintain required levels of readiness. For the ARNG this minimal level of support equates to 30,402 AGR and 29,329 Military Technician personnel, or approximately 71 percent of the full-time support requirement.

The Army plans to seek increases in Reserve Component full-time support, incrementally, to attain the 71 percent fill by fiscal year 2012. However, due to resource constraints within the Army, the plan for increases is not funded within Army appropriations. The Army National Guard seeks appropriations and authorizations for increases of 724 AGR and 487 Military Technician personnel per year beginning in fiscal year 2002 and culminating in fiscal year 2012.

Question. What is the status of upgrading and updating aviation assets in states such as West Virginia which only has one UH1H lift helicopter available to fly? Also, will the aviation force structure in West Virginia and other states be large enough to meet mission requirements and also be large enough to prevent a reduction in force of the full-time aviation personnel and closing of facilities?

Answer. The Army National Guard (ARNG) is working diligently with the Army Deputy Chief of Staff for Operations and Plans (DCSOPS) and Army leadership to formulate a realistic plan that will allow for timely replacement of our aging UH–1 aircraft. Presently the ARNG is receiving the necessary parts to fix a small number of UH–1 helicopters per month in order to continue operating until the UH–1 fleet can be replaced.

As pertains to the aviation force structure and support facilities and personnel in West Virginia and other States, the impact cannot be assessed until the revised 2001 Army Aviation Modernization Plan (AAMP) is approved by the Chief of Staff Army (CSA) and released to the ARNG. However, it appears a certainty that overall the Army and ARNG aviation force structure will be smaller as the Vietnam-era AH–1 and UH–1 fleets are replaced with the modernized, more capable AH–64 and UH–60 aircraft, on a less than one-for-one basis.

QUESTIONS SUBMITTED TO MAJOR GENERAL ROGER C. SCHULTZ

QUESTIONS SUBMITTED BY SENATOR TED STEVENS

ARMY GUARD FLYING HOUR PROGRAM

Question. I understand that the Army Guard flying hour program is significantly underfunded. There is also concern that your pilots are not being given enough hours to fly basic minimums. What are your challenges in this area? What will be the impact of both short and long term readiness of the Army National Guard?

Answer. In fiscal year 2001, the Army National Guard (ARNG) identified a significant shortfall in its flying hour program (FHP). This was caused by a small shortage in the number of hours allocated, combined with the key fact that the actual cost of flying a modernized series ARNG aircraft (UH–60 Blackhawk, AH–64 Apache, CH–47 Chinook) significantly exceeds the hourly funding allocated by the Army, and does not match the funding per hour provided to other Army commands flying the same aircraft in the same geographic areas.

Based on mission priorities, some ARNG units were not provided the FHP necessary to maintain full proficiency in all individual and unit tasks. There is a measurable impact of the overall readiness of these ARNG aviation units, and this impact is being appropriately reflected in the Army's unit readiness reporting system.

MILCON FUNDING

Question. Please comment on how long, at the current rate of MILCON funding, it will take to replace the plant value of your assets and your current backlog and annual requirement in real property maintenance?

Answer. Using the current budget, it would take approximately 300 years to modernize/replace the Army National Guard's (ARNG) assets. The current backlog for real property maintenance is nearly $7 billion. According to The Army's Installation Status Report, ARNG requires $439 million per year just to sustain its existing real property at its current inadequate condition, and prevent further deterioration.

ARMY GUARD AVIATION ASSETS

Question. Describe the Army's plan to modernize the Army Guard Aviation assets—both in short and long terms?

Answer. While the full details of the revised 2001 Army Aviation Modernization Plan (AAMP) are not yet approved by the Chief of Staff of the Army (CSA) and released to the ARNG, it is certain that there will be a significant short and long term impact.

In the short term, the repeated groundings of the Army National Guard (ARNG) Vietnam-era AH–1 Cobra and UH–1 Huey aircraft, combined with full retirement of both fleets (AH–1 in fiscal year 2001 and UH–1 in fiscal year 2004), severely limits both unit and individual aviator readiness. In the long term the Army's current procurement and cascade (active to ARNG) rates of modernized aircraft is not adequate to make up the differential. The current Army buy of the critical UH–60 utility helicopters is 10 per year, at which rate will take well over 20 years to bring ARNG aviation units back to acceptable level of fill.

TOUR LENGTH TO THE BALKANS

Question. We were in Kosovo this past February and I was reminded again of the great contributions made by the guard in support of our national military strategy. I understand that the Army Guard forces mobilized for duty in the Balkans typically serve deployed tours of 179 days. Combined with other required training, the combined length is typically 220–250 days for National Guard soldiers. I believe this puts a tremendous strain on the units and the individuals who support these missions. Has the Army Guard and the Army considered shortening tour lengths to the Balkans?

Answer. The Army National Guard has been following the Chief of Staff, Army rotational policy guidance of 179 days in theater for Balkan operations. The Army along with the Army National Guard has discussed shorter rotations such as 120 days or 90 days for the Balkans. The Army National Guard currently deploys units on shorter rotations to South West Asia and has reduced rotational lengths for medical personnel, lawyers and aviation assets. Discussion continues between both staffs on the feasibility for shorter Balkan rotations and the potential impacts on units, families, employers, communities and funding such as added transportation requirements for personnel and equipment and training site usage. As the Guard takes on more of a role in the Balkans, it will continue to work towards better rotational solutions that will reduce PERSTEMPO and OPTEMPO for all components of the Army.

QUESTIONS SUBMITTED BY SENATOR PATRICK J. LEAHY

ARMY NATIONAL GUARD REQUIREMENTS

Question. General Schultz, does the Army National Guard have a requirement for the M109A6 Paladin Self-Propelled Howitzer system? How many additional battalions are required to satisfy the current Army National Guard requirement? To what degree are these missioned in the Commanders-in-Chief (CINC) theater war plans?

Answer. 13 battalion sets are required to completely modernize Army National Guard divisional artillery requirements. Eight of the 13 battalions are missioned against Commander in Chief (CINC) war fighting requirements at echelons above division.

M109A6 PROCUREMENT

Question. Is M109A6 procurement included in the Army fiscal year 2002 Budget? Realizing that their are funds available as a result of Foreign Military Sales of Paladin, could such funds be used for the procurement of M109A6 Self-Propelled Howitzers for the Army National Guard (ARNG)?

Answer. The Army fiscal year 2002 Budget does not address the procurement of additional M109A6 (Paladins). The Army National Guard has 13 Divisional Field Artillery Battalions, which are M109A5 equipped. Eight of these Battalions are also missioned against Commander in Chief (CINC) CORPS war fighting requirements. Although nothing is currently programmed, the ARNG anticipates receiving up to four additional Cascaded M109A6 Battalion sets in fiscal year 2002. As we continue to modernize the ARNG Divisions with M1A1 Abrams Tanks and Bradley Fighting Vehicles, it is essential the Divisional Field Artillery Battalions (particularly those missioned against CINC CORPS war fighting requirements) be modernized. Without Paladin Howitzers, these units will lack the essential responsiveness, survivability, and interoperability in the Advanced Field Artillery Tactical Data System digitized operational environment.

Question. Do you have additional information that you care to provide the Committee on this subject (M109A6 Paladin)?

Answer. There is an Army National Guard fiscal year 2003–07 POM Initiative to buy three battalion sets of Paladin for $102 million. The three additional battalion sets would go to California (40th Infantry Division (M)), Pennsylvania (28th Infantry Division (M)) and Texas (49th Armored Division).

QUESTIONS SUBMITTED TO MAJOR GENERAL PAUL A. WEAVER, JR.

QUESTIONS SUBMITTED BY SENATOR TED STEVENS

FUNDING SHORTFALLS

Question. I understand that the Air Guard faces significant funding shortfalls this year. Can you describe these shortfalls and the impact on the Air Guard of not receiving supplemental funds? What will be the impact on both short and long term readiness of the Army National Guard?

Answer. Funding shortfalls included in the fiscal year 2001 supplemental (as of 1 Jun 2001) are flying hours ($93.0 million), utility costs ($16.3 million), and depot maintenance surcharges ($10.0 million). If not fully funded, the "must pay" aspect of utility bills, working capital fund losses, and civilian compensation unfunded mandates require sourcing from other O&M programs. Flying hours, already under funded, and depot maintenance are the only viable funding options. Some combination of curtailed flying activity and reduced over-haul/repair of ANG aircraft will result. Thus readiness is vulnerable on two fronts: less training available for aircrews and potentially fewer aircraft available for sortie generation.

AEF ROTATIONS

Question. Describe how the transition to the AEF is going for the Air Guard? What are your major challenges in supporting the active Air Force in these rotations?

Answer. The Aerospace Expeditionary Force (AEF) transition has presented some real challenges for us and the Air Force, however, we are ovecoming them and becoming more adept within the AEF concept. We put 24,184 personnel into the AEF in Cycle One which included 8,411 Expeditionary Combat Support (ECS) personnel. This was a substantial effort and equaled approximately 19 percent aviation and 8 percent ECS of all the requirements of the three Commanders in Chief (CINCs).

Our major challenges in the future are securing qualified personnel via volunteerism. As the AEF progresses, the ability to get volunteers will dwindle to the point where we may have problems filling the slots which we have committed. This is our biggest challenge and fear. Initially, we felt the Air Force was uncertain about working side-by-side with us. The challenge was in their acceptance of us and our two-week rotations. Although there are still pockets of skepticism, the overall attitude seems to be changing. This is in large part to our Guard members performing at exceptional levels that allows the Air Force to see we are a well-trained, professional military organization.

Another challenge that we have taken on, is the ability to get names of deployers to the theaters in a timely manner. This is a huge problem for a volunteer organization. We are required to have names to the CINCs personnel operation 60 days prior to the Date-Required-In-place, and although this is a formidable task that we sometimes have trouble accomplishing, we are continuing to work this problem and are confident that soon it will no longer present such a challenge.

Question. Based on your operational requirements and lessons learned from AEF rotations, do you have the full-time force that you need?

Answer. The Air National Guard (ANG) recently accomplished a complete review of both our full-time and traditional guard manpower requirements needed to support the AEF now and well into the future. The results of this effort validated a requirement of 2,048 additional full time manpower resources. Historically the ANG has been resourced as a respond (Cold War) force with limited full time manpower to operate and maintain facilities, repair aircraft/equipment, and train the drilling force. Now with a formalized AEF construct and increasing support requirements, the ANG must begin to be resourced properly for both drill training and increased Operation Tempo (Optempo). Thus far we have funded 1,151 of our requirement through internal ANG offsets and through funding and support received from the Air Force during the POM process, leaving an unfunded requirement of 897 full-time positions. Increased Optempo and aging aircraft and weapon systems are driving increased maintenance workloads to ensure aircraft and systems are available for training and deployment. Our review also identified shortfalls in infrastructure and communications, additional air traffic control and combat communications oper-

ators, additional full time aircrew and crew compliment adjustments in the airlift and air refueling mission areas. We are continuing our efforts to obtain the balance of the funding and end strength required.

REAL PROPERTY MAINTENANCE

Question. How long, at the current rate of Milcon funding, it will take to replace the plant value of your assets and your current backlog and annual requirement in real property maintenance?

Answer. *Recapitalization Rate*.—The current rate of total MILCON funding in the Air Force budget is roughly $57 million per year (including planning and design and unspecified minor construction). The recapitalization rate is roughly 260 years based on the average calculated plan replacement value of $14.9 billion from fiscal year 2002 to fiscal year 2007.

Real Property Maintenance (RPM).—The current RPM backlog is $1.1 billion and growing. The annual funding for RPM is based on the Air Force model of 1 percent of plant replacement value (PRV). This funding is then reduced by $21 million for what Air Force calls the "state subsidy". More accurately the reduction accounts for RPM type work that is accomplished under the ANG's facilities operations and maintenance account (FOMA) which is paid for with real property services (RPS) funds. Given our $12.6 billion PRV that means roughly $100 million per year is given to the ANG for RPM work. Of this amount $70 million goes directly to the bases, and the balance is distributed for conversions, design, and overhead. This is far short of the requirement across all our installations. It is reasonable to expect execution of $150–$200 million per year, which creates an annual shortfall of $50–$100 million.

Projects of highest priority for RPM funding include $230 million in airfield pavement repairs for cracked and spalling airfield pavements, $115 million for primary mission operational facilities to repair leaking roofs and allows functional use of buildings, $465 million for mission support, aircraft maintenance, security forces, and crash fire rescue facilities to repair failed fire suppression systems, failed heating and ventilating systems and other quality of life issues, and $220 million for base support such as supply storage, vehicle maintenance, administrative, and utility distribution systems.

GUARD AND RESERVE EQUIPMENT

Question. Please comment on the importance of the additional funds provided by the Congress for procurement of guard and reserve equipment each year?

Answer. The National Guard and Reserve Equipment Appropriation (NGREA) account has been instrumental in our efforts to modernize ANG aircraft and keep us fully relevant to today's Total Force Military. Using NGREA, we have focused on four key areas: precision strike, 24-hour operations, information dominance, and enhanced threat survivability. Using NGREA and existing Air Force funding we designed an F–16 modification program called CUPID that dramatically increased the combat capability of the entire CAF F–16 Block 25/30 fleet and saved over $100 million in the process. CUPID coupled with another GREA success program, the Lightening II targeting pod, has allowed our F–16 units to perform the full spectrum of combat operations. The Situation Awareness Data Link (SADL) is another example of NGREA successes. We were also able to field Fighter Data Link (FDL) on the ANG F–15 fleet using NGREA funding. FDL is the true F–15 force multiplier and, we are able to maintain full combat capability in the ANG F–15 fleet. In the area of 24 hour operations, the ANG has led the way in fielding Night Vision Imaging Systems (NVIS) across the CAF A–10, F–15 and F–16 fleet. These NVIS systems are now the Air Force standard yet were initially fielded using NGREA funding. We have made great strides in modernizing our 40+ year old KC–135E tankers through the ongoing KC–135E to "R" reengining program. We have also begun to field C–130 Cockpit Armor to allow our C–130 units full protection during in-theater rotations. The flexibility NGREA funding gives us has allowed the ANG to field commercial-off-the-shelf solutions faster and cheaper than otherwise able. These combat enhancements have been invaluable in our efforts to modernize our fleet and support global taskings. I appreciate your continued support for NGREA and offer the heartfelt thanks of our 106,000 ANG citizen soldiers in this regard.

PERSTEMPO

Question. I understand the Air Guard has shifted to a 90-day rotation policy to reduce PERSTEMPO. How is this working?

Answer. By definition, Aerospace Expeditionary Force (AEF) rotations are 90 days, however, this may be a misunderstanding of terms. The Air National Guard

(ANG), like the Active Duty, assumes a 90 day AEF commitment for a given AEF pair. The Air National Guard fills this commitment through a process we call "Rainbowing" where we utilize two units or more to cover this 90 day period. In most cases we have three units each filling 30 days of this 90-day period with one of the three designated as the lead unit for planning purposes. The units then fill their 30-day period with ANG "volunteers". Our commitment to the Air Force is 15 days in country as a minimum. This is spelled out in Air Force Instruction (AFI) 10–400 and also in Air National Guard Instruction (ANGI) 10–400. As a rule, approximately 20 percent of our personnel have historically volunteered for tours in excess of 15 days in country; however, ANG policy only requires the 15 days. Our goal is for each member of the ANG Expeditionary Combat Support community to rotate overseas in support of AEF commitments once every 30 months (every other AEF cycle). This of course is more difficult to accomplish within our aviation packages and in some of our critical skills AFSC's. It is important to note that the ANG entered into the Expeditionary Aerospace Force (EAF) concept for the long haul. We have carefully balanced historical OPTEMPO/PERSTEMPO deployment rates with our AEF expectations and have committed to what we believe we can "sustain" without negatively impacting retention and the health of our units.

QUESTION SUBMITTED BY SENATOR PATRICK J. LEAHY

KC–135

Question. General Weaver, the KC–135 Tanker has served the country well over its 35 years of service, but I fear that we are not managing the Guard's inventory very well. Increasing operations and maintenance funds are being eaten up by the old "E" version, which nine Guard Air Refueling Wings are still flying. The E has significantly shorter range than the re-engined "R" model, which contributes more to our aerial refueling needs.

From what I understand, converting the Guard's 93 KC–135Es will save up to $7 billion over the life of the program, more than covering the $2 billion to complete the conversion. Can you tell me what the impact will be of failing to carry out the E to R conversion program?

Answer. The E–R conversion program is essential to the viability of the KC–135 fleet. In addition to the overall savings in maintenance and sustainment costs there are many more benefits that will be realized by converting to "R" model engines.

The CFM–56 engine on the KC–135 R, meets or exceeds STAGE III noise and emission standards, provides fleet commonality and allows interoperability between Air Force, Air Force Reserve Command and Air National Guard Stage III noise and emission standards went into effect at the beginning of this year. Technically government aircraft are exempt from these standards, however there is still precedence for restricted access to some foreign locations or increased landing fees for failure to comply. There is also the "good neighbor aspect". Since most of our KC–135 E model units are located at civilian airfields pressure to comply with the standards is increased because we are being constantly compared to civilian traffic. An E model streaming black exhaust and rattling windows is not the most effective way to advertise your presence in the neighborhood.

KC–135s are an indispensable part of any United States overseas operation. As seen in the recent past more and more tankers are required to keep our bombers, fighters and mobility aircraft refueled and flying. A common fleet would cut the logistics tail in half and reduce forward basing limitations because of differing requirements between E's and R's.

Completing the re-engining of the fleet would also allow total interoperability. Any KC–135 crew could fly any KC–135. This would increase overall utilization rates for the aircraft and decrease the need to pick and choose between units on when and where they will deploy.

When an E model is converted to an R model there are many other upgrades included in the modification line. These improvements include, just to name a few, a new auxiliary power unit, new main landing gear, reinforced wing structure, and more. All these improvements make the aircraft safer; more cost efficient and more reliable.

Following are some of the effects of not upgrading the KC–135. Higher Engine Depot Maintenance/Overhaul Costs for the KC–135E will continue. ANG fiscal year 2000 TF33–P102, KC–135E engine overhaul costs were $588,000 per engine times 70 engines versus $183,000 per engine times 6 engines for the CFM–56, KC–135R engines. Projected ANG fiscal year 2001 TF33–P102, KC–135E engine overhaul

costs are $1.039 million per engine times 45 engines versus $399,000 per engine times 10 engines for the CFM–56, KC–135R engines.

Decreased KC–135E aircraft availability as the KC–135E engines have a 10 year unscheduled removal rate that is, on average, ten times that of the KC–135R engines. Missed cost avoidance opportunity of $137–$276 million for the replacement of corroded KC–135E engine struts if all KC–135E's are not modified to KC–135R's. E to R model conversion includes replacement of engine struts.

E models will continue to accrue additional depot costs to repair corroded engine struts. ANG/LGMA cannot validate the purported $7 billion life cycle savings from a logistic perspective. 1996 OC–ALC study states zero life cycle savings to 2040. 1999 Boeing study states over $10 billion life cycle savings to 2040.

QUESTION SUBMITTED BY SENATOR RICHARD J. DURBIN

C–130

Question. I am very concerned about delays in replacing the aging C–130Es at the 182d Airlift Wing in Peoria. The unit had been scheduled to get "H" models when another unit upgraded to C–17s. While I would welcome the 182d receiving the newer J models, the E models are so old they are unlikely to last until the J models are delivered in 2016 or later. Why has that plan changed? What do you propose to do to modernize the C–130 fleet in Peoria to be sure the unit can keep flying?

Answer. The ANG always seeks to acquire and maintain the most capable and effective aircraft fleet possible. This desire is unfortunately sometimes constrained by fiscal and operational realities imposed upon us from external sources.

While there is no funded ANG program to replace the C–130E aircraft, we have developed plans to incorporate a variety of possible modernization initiatives into the ANG airlift fleet. The 182 AW at Peoria will benefit from the ensuing redistribution following any airlift modernization initiatives, as they are next in line in the ANG C–130E Modernization Plan, signed by NGB/CF on 22 January 1998.

The most near-term USAF modernization program is the C–130 Avionics Modernization Program, which is pending a source selection decision. This will upgrade the avionics and supporting infrastructure of the C–130E and C–130H aircraft into a modern, common configuration. This modification will provide for full Global Air Traffic Management (GATM) compliance, allowing global airspace access.

The United States Air Force (USAF) C–130J roadmap reflects the ANG decision to move 8 C–130H aircraft to the 152 Air Wing (AW) Nevada Air National Guard (NVANG) in order to provide additional operational capability for that unit in their Senior Scout mission. The 182 Air Wing (AW) Illinois Air National Guard (ILANG) replaced Reno in the USAF C–130J beddown roadmap, where they are projected to receive 8 C–130J aircraft in 2016. This has since changed to reflect the wishes of the Adjutant General (TAG) ILANG. The 182AW will receive C–130H model aircraft when the 144 Airlift Squadron, Alaska (AK) ANG receives C–17s.

SUBCOMMITTEE RECESS

Senator INOUYE. The subcommittee will stand in recess until Wednesday, May 23.

Thank you very much.

[Whereupon, at 12:13 p.m., Wednesday, May 9, the subcommittee was recessed, to reconvene at 9:30 a.m., Wednesday, May 23.]

DEPARTMENT OF DEFENSE APPROPRIATIONS FOR FISCAL YEAR 2002

WEDNESDAY, MAY 23, 2001

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

The subcommittee met at 9:39 a.m., in room SD–192, Dirksen Senate Office Building, Hon. Ted Stevens (chairman) presiding.

Present: Senators Stevens and Inouye.

NONDEPARTMENTAL WITNESSES

STATEMENT OF MARY J.C. HENDRIX, Ph.D., PRESIDENT, FEDERATION OF AMERICAN SOCIETIES FOR EXPERIMENTAL BIOLOGY

OPENING STATEMENT OF SENATOR TED STEVENS

Senator STEVENS. Good morning. I apologize for being late. There are all sorts of strange things happening around this place this morning, and I know we have 34 witnesses today that want to submit their statements and make comments for the record. We are going to do our best to hear you. I would hope that you would understand our problem.

Senator Inouye and I are going to have to go vote some time in the next 15 minutes and after that we will probably be on a 10-minute cycle. So what I would like to do is break that cycle when we get to the floor, but I do not know how successful we will be.

I would like to tell you that we are going to hear as many of you this morning before we go vote as we can. All the other statements will be filed in the record as though read if we do not get back. But you are welcome to wait as long as your patience will allow you to do so. But we do not control the situation on the floor and that is the best thing we can do.

I do appreciate your courtesy of being here. We want to hear from you, and as a matter of fact this may be the last hearing I will chair, as I turn it over to my friend. As far as defense is concerned, it would make no difference. We are absolutely in agreement, I believe, on all matters concerning defense. So I am very comfortable with telling you I will happily listen to Senator Inouye as long as necessary.

Senator INOUYE. We just rotate chairs.

Senator STEVENS. Ms. Hendrix, will you please proceed. The shorter you will be, the more people we will hear. Thank you very much.

Dr. HENDRIX. Good morning, Mr. Chairman and distinguished members of the subcommittee. I thank you for the opportunity to testify today as President of the Federation of American Societies of Experimental Biology (FASEB). FASEB is comprised of 21 societies with more than 60,000 scientist members and is the largest coalition of biomedical research associations in the United States. Our mission is to enhance the ability of biomedical and life scientists to improve through their research the health, wellbeing, and productivity of all people.

I am also especially honored to address the Defense Subcommittee today as the daughter of a career naval officer Captain Charles N.G. Hendrix.

It is not commonly appreciated that more than one-half of the Department of Defense's (DOD's) 6.1 research budget is awarded to university researchers. In addition to research-supported academic institutions, the DOD also supports graduate students working for their doctorates and also training for research careers. The DOD therefore plays a leading role in engaging and encouraging future researchers on whom both our future military and economic security will depend.

Let me offer just one stellar example of DOD research. The Virtual Naval Hospital, a digital health sciences program to deliver expert medical information to health providers, patients, and their families at remote sites of deployment, represents one of the best examples we know of an academic-military partnership that involves the University of Iowa and the United States Navy Bureau of Medicine and Surgery. I serve as the Administrative Co-Director of the Virtual Naval Hospital and have the privilege of working with physicians at the University of Iowa and Captain Richard Baccalar, who is Director of Navy Telemedicine at Bethesda Naval Hospital.

The Virtual Naval Hospital provides health promotion information and military clinical handbooks and manuals for providers, which previously consumed a lot of space on board ship, and now all that information is contained on convenient computer disks. In addition, the Virtual Naval Hospital offers the opportunity for personnel to enroll in educational courses on line that accrue credits toward their college degrees. The slogan "Go to Sea and Get a Degree" was recently carried by the press in a recent article about the benefits of the Virtual Naval Hospital and shows how taxpayer dollars and time can be saved and maximized to everybody's benefit.

Mr. Chairman, in inflation-adjusted dollars DOD's budget for basic research in the life sciences declined by 25 percent in the years from 1993 to 1998. This steady erosion in commitment has come at a time when the scientific potential to dramatically improve our military readiness is more promising than ever. As the pace of technology quickens, it is clear that new funding and research opportunities for DOD basic research programs are at a critical need if the United States military is to maintain its current technological superiority.

Therefore, FASEB recommends a $50 million increase to the DOD basic research 6.1 budget for life sciences for fiscal year 2002. FASEB strongly supports the extramural programs in life sciences that are managed by the congressional-directed medical research

program. This program has maintained the highest standards of merit review and has benefited both military and non-military individuals.

Lastly, FASEB also recommends that DOD be encouraged to extend its existing interagency collaborations with academic institutions, with industry and other government agencies to achieve multi-interdisciplinary efforts with broadly based information networks.

Mr. Chairman, that concludes my testimony and I thank you for this opportunity.

Senator STEVENS. Thank you very much.

[The statement follows:]

PREPARED STATEMENT OF MARY J.C. HENDRIX, PH.D.

Mr. Chairman and distinguished Members of the Subcommittee, I am Mary J.C. Hendrix, Ph.D., President of the Federation of American Societies for Experimental Biology (FASEB) and the Kate Daum Research Professor and Head of the Department of Anatomy and Cell Biology and Associate Director of Basic Research and Deputy Director of the Holden Comprehensive Cancer Center at The University of Iowa in Iowa City, Iowa.

Thank you for the opportunity to testify before you on behalf of FASEB, which is comprised of 21 societies with more than 60,000 scientist-members and is the largest coalition of biomedical research associations in the United States. FASEB's mission is to enhance the ability of biomedical and life scientists to improve, through their research, the health, well-being and productivity of all people. FASEB serves the broader public, by serving as the voice of biomedical scientists nationwide.

FASEB'S COMMITMENT TO DOD RESEARCH MISSION

In the balance of my testimony this morning, I will be offering recommendations developed during FASEB's Annual Consensus Conference in December of 2000. Representatives of our 21 member societies gathered to review the research portfolios of all federal agencies that support biomedical research. As FASEB President, I made sure that my scientist colleagues paid special attention to DOD's portfolio, because it supports cutting edge research that can benefit our society as a whole, as well as support its national security mission.

DOD'S BASIC RESEARCH MISSION

The Department of Defense (DOD) supports a major basic research program in the Life Sciences that has produced significant benefits for the nation. The productivity of this program is threatened, however, by a decline in funding. FASEB urges a reversal of this trend in the interests of the nation's health, economy, and military readiness.

TABLE 3.—DOD LIFE SCIENCES

BIOLOGICAL SCIENCES	MEDICAL RESEARCH	BEHAVIORAL, COGNITIVE AND NEURAL SCIENCES
Molecular & Cellular Systems & Organisms Biomimetics Biorobotics Biosensors Marine Mammals Environmental Biology Non-medical Chemical and Biological Defense	Infectious Diseases Of Military Importance Combat Casualty Care Military Operational Medicine Medical Chemical/Biological (CB) Defense	Personnel, Training And Leadership Human-System Integration/Human Factors Pattern Recognition

Table 3, DOD basic research in the Life Sciences falls into three major categories: biological sciences, medical research and behavioral and cognitive neural sciences.

DOD basic research in the life sciences addresses all of the major levels of biological organization: molecular, cellular, tissue, organ, organ system, integrated organism, and cognitive science (Table 3). On average, about 13 percent of the agency's basic research budget (6.1)—which in fiscal year 1999 was $1,107.9 million—is invested in the Biological and Medical Sciences; six percent in the Cognitive and Neural Sciences[1] (Figure 6). In addition, the DOD manages the Congressional Special Interest Medical Research Programs, which focus on, among other areas, programs on cooperative DOD/Veterans Administration (VA) medical research, defense health research, defense women's health research, and osteoporosis research.

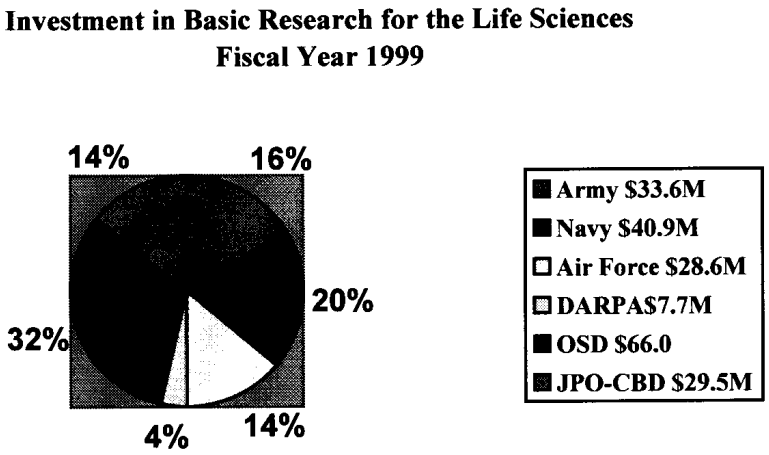

FIGURE 6. This chart represents a DOD estimate of the 6.1 investment in the Life Sciences ($206.3 million). The agency's investment in the Congressional Special Interest Medical Research Programs, which includes the Congressionally Directed Medical Research Programs, is not reflected in these numbers. Source: Office of Basic Research, ODUSD (S&T), DOD.

Most of the extramural basic research is executed through the Army Research Office (ARO), the Office of Naval Research (ONR), the Air Force Office of Scientific Research (AFOSR), the Defense Advanced Research Projects Agency (DARPA), and the Army Medical Research and Materiel Command. Coordination and cooperation among offices is managed through several committees (called Project Reliance) established to minimize unnecessary duplication. Additionally, the DOD collaborates with National Institutes of Health (NIH), the VA, and the National Oceanographic and Atmospheric Administration to leverage its funding and avoid duplication. More than one-half of the DOD's 6.1 budget is awarded to universities.[2] Significant portions of these funds support graduate students working for their doctorates and/or training for research careers. Thus, DOD is actively engaging and encouraging future researchers on whom both the future military and economic security of the United States will depend.

RECENT ACCOMPLISHMENTS

Today, military personnel are protected from epidemic hepatitis as a result of knowledge gained from basic research on the biology and immunology of the hepatitis-A virus. In addition, basic research into the physiology of body temperature control has produced procedures that are used at Army Ranger training sites to protect trainees from hypothermia, and which have been adapted for civilian use. The Virtual Naval Hospital (VNH), a digital health sciences program designed to deliver expert medical information to health providers and patients at remote sites of deployment, represents a fruitful academic-USN partnership and provides a template to provide telemedicine services to civilians and to meet some of the specialized needs of veterans. These are just a few examples of the breadth of DOD contribu-

[1] http://www.acq.osd.mil/ddre/research/.
[2] *Basic Research Plan, Third Edition.* Office of the Deputy Under Secretary of Defense (Science & Technology/Plans and Programs), pg. II–4.

tions to biomedical research. Detailed below are a few specific accomplishments of both military and civilian benefits of life science research.

Medical Research

DOD-funded scientists established an in vitro cultivation system for malaria parasites, which contributed significantly to the malaria genome sequencing, and is thus important in the development of future vaccines.

DOD-funded scientists determined that brain regions mediating the highest order mental capabilities are most susceptible to sleep deprivation and are also the most easily restored by subsequent sleep. These findings will have innumerable consequences for military deployments as well as for other occupations in which sleep deprivation is an issue, such as airline pilots and physicians.

DOD-funded scientists determined how red blood cells and platelets could be stored long-term for later transfusion into humans, while maintaining Food and Drug Administration standards for safety and efficacy.

DOD-funded scientists characterized three protein components of two anthrax toxins in order to better understand virulence patterns and to facilitate vaccine development.

Behavioral, Cognitive and Neural Sciences

DOD supported research leading to the development of an implantable "eye chip" able to replace damaged retinas to restore lost vision.

Congressional Special Interest (CSI) Medical Research Programs

DOD played a significant collaborative role in the development of both antibody-mediated and vaccine therapies directed against a novel breast cancer protein (HER-2).

SCIENTIFIC OPPORTUNITIES

The demonstrated and potential future impact of DOD's basic research program is tremendous. The research programs are competitive, productive, and vital to our nation. Advances in immunology, toxicology, physiology, neuroscience, biochemistry, psychology, and molecular biology, all of which are directed toward the understanding of disease and injury processes that will transcend the active military applications bringing benefits to both veterans and the broader civilian community. The knowledge will be used to enable applied research for the development of novel drugs, vaccines, medical devices, health promotion and prevention procedures, medical diagnostics, and treatments for trauma and disease.

The following research themes in the biological sciences are examples of how additional resources might be used. Such an investment will also lead to the expansion of partnerships between the military, academe and the private sector.

Basic Research in the Life Sciences

Biological Sciences.—Research on olfactory sensing offers novel biologically inspired approaches for the design and eventual production of engineered systems capable of detecting trace amounts of explosives and toxic chemicals. In addition, this research will provide the military with unique advanced capabilities for sensing contamination of food, clothing, material, and the environment. Basic research on antibodies, characterization of cell surface receptors, and cell-based sensing has enabled the development of biochemical detector technology and provided the U.S. military with its first automated capability for detecting biological substances. These discoveries will concomitantly benefit society as a whole.

DOD Cognitive and Neural Sciences.—Two important areas of opportunity for collaborative potential with academic and industrial partners are Behavioral Science and Neural Science. Behavioral science research seeks to use the understanding of human performance to improve personnel selection, assignment, and training, to augment personnel performance in military environments, and to organize more effective teamwork in command and control organizations. Neural science studies explore reverse engineering of biological neural systems, for example studies of dolphin and bat active sonar processing, for target detection, tracking, and classification.

Congressional Special Interest (CSI) Medical Research Program

The CSI's Congressionally Directed Medical Research Program (CDMRP) is an unprecedented partnership among the military, scientists, physicians, and the patient-advocacy community, bringing together multi-disciplinary efforts to focus on the control and ultimate eradication of specific diseases, such as breast cancer, prostate cancer, neurofibromatosis, and ovarian cancer. This highly effective program con-

tinues to offer opportunities pursuing novel directions in medical research and for attracting and training new investigators in these fields.

Partnerships

Unique funding and partnership opportunities exist from DOD sources, which include the Young Investigators Programs, the Small Business Innovation Research Program, the Faculty Sabbatical Leave Program, the Infrastructure Support Program for Minority Institutions, the High School Science Awards Programs, and the Clinical Translational Research Programs. Other noteworthy partnerships include the University Research Initiative (URI), a merit-reviewed program that is vital to the academic-DOD partnership. It is important to maintain funding for this program, which includes the Multidisciplinary University Research Initiative (MURI), which supports research groups from different disciplines working for a common objective; the Defense University Research Instrumentation Program (DURIP), which supports badly needed instrumentation for scientific and engineering research; the National Defense Science and Engineering Graduate Fellowships, which allow outstanding students to pursue graduate research in areas of strong interest to DOD; and, the Defense Experimental Program to Stimulate Competitive Research (DEPSCoR), which funds research in states that are under-represented in federal research support.

FUNDING RECOMMENDATIONS

FASEB recommends a $50 million increase to the DOD Basic Research (6.1) budget for the Life Sciences for fiscal year 2002. This increase should be for the designated purpose of providing an increase to the Army, Navy and Air Force Defense Research Science Programs (program elements #0601102A, 0601153N and 0601102F), the University Research Initiatives, and the Chemical and Biological Defense Program.

DOD's budget for basic research in the life sciences has declined by 25 percent from 1993 to 1998 (in inflation-adjusted dollars).[3] These cutbacks have compromised basic biomedical research at a time when the potential to have a larger impact on military readiness is greater than it has ever been. As the pace of technology quickens, it has become obvious that new funding and research opportunities for the DOD Basic Research Program are critical if the U.S. military is to maintain its technological superiority. Therefore, it is imperative that the level of support for this area be substantially increased to realize this potential.

FASEB strongly supports the extramural programs in life sciences research managed by the Congressionally Directed Medical Research Program (CDMRP). The CDMRP has maintained the highest standards of merit review, and represents an excellent example of a unique partnership among the military, scientists, physicians, and patients. The benefits from this collaborative, integrative approach to address various aspects of medical research are innumerable—to both military and non-military individuals.

FASEB recommends that DOD be encouraged to extend its existing interagency collaborations.

We highly encourage collaborative extramural partnerships with academic institutions, industry, and other government agencies to achieve multi-disciplinary efforts with broadly based information networks. There are great opportunities to be gained by encouraging additional multi-agency collaborative interactions to meet national goals and maximize the DOD investment portfolio. In this manner, the fundamental research needs of each branch of DOD engaged in basic and applied research can be more effectively attained.

DOD Biological and Biomedical Research is not duplicative of funding provided by other agencies. Nonetheless, there are synergistic existing partnerships with the National Science Foundation (NSF) and other federal departments and agencies, and with interagency groups such as those under the National Science and Technology Council. In addition, opportunities exist for collaborations with NIH institutes, as evidenced by the recent solicitation for research applications on likely bioterrorism pathogens by the National Institute of Allergy and Infectious Diseases. The National Cancer Institute has announced the creation of the first network for cancer information, which will allow the integration and sharing of all basic and applied cancer research activities among multiple agencies.

We encourage cross-agency participation of DOD scientific staff in NIH and NSF strategic research planning that would likely lead to mutually beneficial interagency initiatives, thereby maximizing the Congressional investment.

[3] *Ibid*, pg. I–1.

In conclusion, Mr. Chairman and members of the Subcommittee, I thank you for this opportunity to testify before you on behalf of my more than 60,000 scientist-colleagues. We urge you to increase support for DOD 6.1 research and encourage inter-agency partnerships that will leverage the return on our national security research investment.

Senator STEVENS. Dr. Knapp.

STATEMENT OF DEIRDRE J. KNAPP, Ph.D., AMERICAN PSYCHOLOGICAL ASSOCIATION

Dr. KNAPP. Good morning. Mr. Chairman and members of the subcommittee: I am Dr. Deirdre Knapp, Manager of the Assessment, Research, and Analysis Program at the Human Resources Research Organization (HmRRO). I am submitting testimony on behalf of the American Psychological Association, a scientific and professional association of more than 155,000 psychologists and affiliates.

Although I am sure you are aware of the large number of psychologists providing clinical services to our military members, you may be less familiar with the extraordinary range of research conducted by psychological scientists within the Department of Defense. Our behavioral researchers work on issues critical to the national defense, particularly with support from the Army Research Institute for the Behavioral and Social Sciences, the Office of Naval Research, and the Air Force Office of Scientific Research.

In its most recently congressionally mandated report, the independent Defense Science Board (DSB), noted that "Increasingly, scientific research is the key to military supremacy." However, for each of the last 5 years the Pentagon's budget request for science has not even kept up with inflation, much less approach the minimum level suggested by the DSB.

We thank this subcommittee and your colleagues in the House for reversing deep cuts and providing critical additional support for DOD research in the past several funding cycles. American Psychological Association (APA) joins the Coalition for National Security Research and the DSB in recommending $10 billion for DOD research in fiscal year 2002. Within the DOD, the military service labs provide a stable mission-oriented focus for science and technology, conducting and sponsoring basic research, applied exploratory development research, and advanced development research. Psychological scientists address a broad range of important issues and problems with expertise in understanding and optimizing human performance individually, in teams, and with regard to human-system interactions.

For example, I am working with a project now with the Army Research Institute to develop the foundation for a promotion system that would help ensure that the backbone of the Army, its Non Commission Officer (NCO) corps, is prepared to meet the evolving demands of the twenty first century.

As another example, the Navy has funded cutting edge research in the development and application of artificial intelligence systems that, for example, allow for highly effective shipboard training.

Unfortunately, reductions in the Air Force's support for applied research in human factors have resulted in an inability to determine the human-system requirements early in system concept development, when the most impact could be made in terms of man-

power and cost savings. DOD research has continued to demonstrate the importance of considering the human factor in organizational and system performance and has led to important outcomes, not only in the military but in the public and private sectors in which scientific advances for military research have been successfully applied.

We urge the subcommittee to provide funding increases for each of these three military laboratories at the DSB-recommended level of inflation plus 2 percent, a total of 4.1 percent. Please help our military men and women by supporting DOD human-oriented research.

Thank you.

Senator STEVENS. Thank you very much, doctor.

[The statement follows:]

PREPARED STATEMENT OF DEIRDRE J. KNAPP, PH.D.

Mr. Chairman and Members of the Subcommittee, I'm Dr. Deirdre Knapp, Manager of the Assessment Research and Analysis Program at the Human Resources Research Organization. I am submitting testimony on behalf of the American Psychological Association (APA), a scientific and professional organization of more than 155,000 psychologists and affiliates. Although I am sure you are aware of the large number of psychologists providing clinical services to our military members here and abroad, you may be less familiar with the extraordinary range of research conducted by psychological scientists within the Department of Defense. Our behavioral researchers work on issues critical to national defense, particularly with support from the Army Research Institute, the Office of Naval Research, and the Air Force Office of Scientific Research. I would like to address the proposed fiscal year 2002 research budgets for these three military laboratories within the context of the larger Department of Defense Science and Technology budget.

Department of Defense (DOD) Research Budget

APA joins the Coalition for National Security Research, a group of over 50 scientific associations and universities, in urging the Subcommittee to provide DOD with $10 billion for 6.1, 6.2 and 6.3 level research in fiscal year 2002. This figure also is in line with the recommendation of the independent Defense Science Board.

The Defense Science Board (DSB) released its most recent (Congressionally-mandated) report several weeks ago, noting that "increasingly, scientific research is the key to military supremacy" and concluding that "if the DOD does not pursue a strong forward looking Science and Technology Program, it runs the danger of ultimately falling behind potential challengers." For each of the last five years, the Pentagon's budget request for science has not even kept up with inflation, much less approached the minimum levels suggested by the DSB. We thank this Subcommittee and your colleagues in the House of Representatives for reversing deep cuts and providing critical, additional support for DOD research in the past several funding cycles. Both the DSB and the Coalition for National Security Research (CNSR) recommend funding the DOD Science and Technology Program at a level of at least $10 billion in fiscal year 2002 in order to maintain global superiority in an ever-changing national security environment.

Within DOD, the military service laboratories provide a stable, mission-oriented focus for science and technology, conducting and sponsoring basic (6.1), applied/exploratory development (6.2) and advanced development (6.3) research. These three levels of research are roughly parallel to the military's need to be able to win a current war (through products in advanced development) while concurrently preparing for the next war (with technology "in the works") and the war after next (by taking advantage of ideas emerging from basic research). Our past investment in basic research in particular is responsible for the dramatic increases we have seen in our military capabilities—and yet basic research continues to be a target for cuts and elimination. 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 defense mission needs for critical human-oriented research develop.

The President's budget blueprint does not provide funding details beyond the proposed overall DOD budget, but we urge this Subcommittee to provide funding in-

creases for each of the three military laboratories at the DSB-recommended level of inflation plus two percent. Using the current inflation rate for research costs of 2.1 percent, a 4.1 percent increase in the research budgets will meet the DSB's recommendation of inflation plus two percent.

The Army Research Institute for the Behavioral and Social Sciences (ARI)

In keeping with the DSB's recommendation to increase DOD research budgets by inflation plus two percent, APA recommends that the basic, applied and advanced development behavioral research programs at the Army Research Institute be funded at $24.48 million.

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; and attrition. ARI is the focal point and principal source of expertise for all the military services in leadership research, an area especially critical to the success of the military as future war-fighting and peace-keeping missions demand more rapid adaptation to changing conditions, more skill diversity in units, increased information-processing from multiple sources, and increased interaction with semi-autonomous systems. Behavioral scientists within ARI are working to help the armed forces better identify, nurture and train leaders. One effort underway is designed to help the Army identify those soldiers who will be most successful meeting 21st century non-commissioned officer job demands, thus strengthening the backbone of the service—the NCO corps.

Another line of research at ARI focuses on optimizing cognitive readiness under combat conditions, by developing methods to predict and mitigate the effects of stressors (such as information load and uncertainty, workload, social isolation, fatigue, and danger) on performance. As the Army moves towards its goal of becoming the Objective Force (or the Army of the future: lighter, faster and more mobile), psychological researchers will play a vital role in helping maximize soldier performance through an understanding of cognitive, perceptual and social factors.

The Office of Naval Research (ONR)

APA recommends an increase of inflation plus two percent for the Office of Naval Research's 6.1, 6.2 and 6.3 budgets, for a total of $63.605 million.

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.

The Air Force Office of Scientific Research (AFOSR)

APA urges the Subcommittee to fund basic, applied and advanced technology development behavioral research at the Air Force Office of Scientific Research at a level of $105.5 million (inflation plus 2 percent).

AFOSR behavioral scientists 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 Air Force 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 requirements early in system concept development, when the most impact can be made in terms of manpower and cost savings. For example, although engineers know how to build cockpit display systems and night goggles so that they are structurally sound, psychologists know how to design them so that people can use them safely and effectively.

Summary

On behalf of APA, I would like to express my appreciation for this opportunity to present testimony before the Subcommittee. Clearly, psychological scientists address a broad range of important issues and problems vital to our national security, with expertise in understanding and optimizing cognitive functioning, perceptual awareness, complex decision-making, stress resilience, and human-systems interactions. We urge you to support the men and women on the front lines by supporting the human-oriented research within the laboratories and universities. Thank you.

Senator STEVENS. Sergeant Dean.

STATEMENT OF CHIEF MASTER SERGEANT RICHARD M. DEAN, U.S. AIR FORCE [RETIRED], LEGISLATIVE ASSISTANT, AIR FORCE SERGEANTS ASSOCIATION

Sergeant DEAN. Mr. Chairman, distinguished committee members: On behalf of the Air Force Sergeants Association and our 135,000 Active, Reserve, Guard and military retiree members, I want to thank you for the tremendous support this committee has provided for our personnel and their families' military quality of life issues last year and also thank you for this opportunity.

There are about four areas that I want to highlight today, the first being military pay. Due to force drawdowns that started in the early nineties, enlisted members have had to assume positions of much greater responsibility, and these positions often were held by commissioned officers. The enlisted corps stepped up and they accepted this increase in responsibilities. However, they have had no significant increase in compensation.

We believe the method of military compensation needs a new model and we need to compensate them for their increase in their responsibilities. We also think that we should raise military pay to ensure that all military personnel are above the poverty level and that no one is having to receive additional funds in order to not be on the food stamp program.

The next area I would like to highlight is the basic allowance for housing (BAH). The basic allowance for housing are based on an unrealistic standard. Rank determines the square footage, the number of bedrooms, and whether an apartment or stand-alone dwelling is authorized. This unrealistic standard forces most military members to increase their out of pocket expenses so they can live in relatively safe neighborhoods with relatively decent schools.

Two categories of basic allowance for housing currently exist, the with-and without-dependent rates. The with-dependent rate is seen in order to relieve some of the burdens on married military members. However, members in both categories see this as unjust. Many single members, especially E–4 and above, are forced to live off base because there is not enough dormitory space today. Cost for a one-bedroom apartment whether the person is married or single does not matter. It still costs the same.

We ask that this committee restructure the BAH system to include only one category and a more equitable system aimed at protecting all military members regardless of marital status or rank.

Another area of major concern is the retirement benefits. Service before self was a core value of military members long before core values were buzzwords. Regretfully, our country has not shown a reciprocal dedication to some of those military members, and those are the ones who retired from the military with 20 or more years

of service with a service-connected disability. These members have their retirement pay offset dollar for dollar for every dollar received from Veterans Administration (VA) disability compensation.

We believe that retirement pay and disability compensation are as different as daylight and dark. We ask this committee to make efforts to not keep these disabled retirees in the dark any longer, but to provide them with what they have earned, and that is their full military retirement pay and their VA disability compensation.

On the issue of education, we ask you to raise the value of the Montgomery GI Bill to cover the cost of an average university. We also ask that a one-time enrollment opportunity be abolished and replaced with an open enrollment window, to occur at any time during a member's military service, and that this option be available to all members currently serving in the military.

We also ask that the Montgomery GI Bill enrollment contribution fee be eliminated and that this benefit be provided as an earned benefit. We also ask that members be afforded the option to transfer any or all of their earned education benefits to dependents.

Finally, for our Air Reserve component members, we ask that full comparable retirement benefits be provided as soon as the reserve member retires from the service to their country, instead of having to wait until they are age 60.

Finally, we ask that funds be made available to pay for our Air Reserve members' health care premiums when they are called to active duty for periods of more than 30 days.

Mr. Chairman, committee, with that, thank you.

Senator STEVENS. Thank you very much, Sergeant. Nice to see you today.

[The statement follows:]

PREPARED STATEMENT OF RICHARD M. DEAN

Mr. Chairman and distinguished committee members, on behalf of the 135,000 members of the Air Force Sergeants Association, we want to thank you for the tremendous support this committee provided last year to improve the military health care systems, increase military pay and allowances, increase educational benefits and provide a special, although small, allowance for severely disabled veterans. We also thank you for this opportunity to offer our views on the 2002 funding efforts needed to assure the quality-of-life of our Armed Forces, thereby improving recruitment and retention goals in an effort to ensure the defense of our country.

In this testimony, we will limit the focus to items directly related to quality-of-life issues for active duty Air Force, Air Reserve Component, and retired members and their families. Those items are overall quality-of-life, workload vs. available workforce, military health care, housing and housing allowances, pay, and retirement benefits.

THE QUALITY OF THE MILITARY LIFE

The men and women in the Armed Forces work very long and hard hours in extremely difficult environments to protect this nation. They are generally selfless and devoted to get the job done—often to the detriment of their own well-being while sacrificing many things the average American citizen often takes for granted.

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, diminishing opportunity for educational benefits, and more out-of-pocket expenses with every military member relocation. It is amazing that so many continue to selflessly serve in the Armed Forces. 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

As a result of our Armed Forces members' efforts, we have witnessed the fall of the Berlin Wall, the collapse of the Soviet Union, and the emergence of the United States as the world's only true "super power." As the United States got caught up in the so-called "Peace Dividend" to redirect funds from and decrease manpower within the Department of Defense, many failed to acknowledge the increase in our Armed Force's responsibilities. No longer is our National Strategy one of projecting America's military force only in support of our "vital national interests" but instead one of global engagement and full participation in police actions and humanitarian efforts (military operations other than warfare) around the world. This has taken a tremendous toll on maintaining an all-volunteer force, because instead of decreasing the workload commensurate with the decrease in personnel, the workload has increased to provide support for those operations other than warfare. Global military missions (with far fewer people) have increased several fold while manpower has decreased by almost half. The results are not only an increase in deployments, but also an increase in responsibilities of those left behind as they now must assume even more tasks because the job that needs to be done at home must continue to be accomplished.

Doing "more with less" is greatly deteriorating the morale, proficiency, recruitment and retention of our military forces. Having far fewer people accomplishing far greater tasks has resulted in longer hours, significantly more 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 implemented initiatives in efforts to decrease the impact of this "spent force" situation by transitioning to an Expeditionary Aerospace Force (EAF) concept. Within the EAF concept, predictability of long-term deployments are more visible, and members should be better able to plan their individual responses to lessen the impact of deployments and family separations. However, it should be noted that the EAF is not a "fix" to the manning problems the Air Force faces, but instead an attempt to provide the senior Air Force leadership with a management tool to aid them in meeting the increasing demands with fewer people.

While we applaud this effort, it will only be successful if manning levels are increased. Many officials call for further base realignments and closures to eliminate unnecessary infrastructure and transfer the assets (people, equipment and money) to remaining bases. If this is in fact done, it would decrease the workload and lessen the pace of deployments. If this transfer of manpower is not done, more and more military members will leave, and fewer and fewer people will choose to enter any of our Armed 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 action to establish manpower levels to match the mission requirements our nation has chosen to levy on those who serve—both at home and abroad.

MILITARY PAY

Building on the gains made in the fiscal year 2001 Authorization, it is important to realize that the work is not finished. We applaud the pay adjustments made, but they are only the first step in accurately adjusting the pay charts. Also, increasing annual future military pay raises through the year 2006 by a half percentage above the Employment Cost Index sent a strong signal to those serving in our Armed Forces. However, there are some realities which must be examined about the way we pay our military members—especially the enlisted 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 while the manpower reductions have placed more and more responsibility upon the shoulders of the enlisted force. As AFSA representatives visit United States Air Force bases around the world, they run into innumerable cases where relatively low-ranking enlisted members are handling technologically awesome tasks. In addition, many positions previously held by commissioned officers are now held by enlisted members. The responsibilities of these converted positions, often involving life or death decisions, have not changed; only the pay grades of the persons now making those decisions have changed. Not only have the mid-to-upper grade noncommissioned members assumed many tasks formerly performed by commissioned officers, they often assume the responsibility to train junior commissioned officers.

While at the same time facing the same "economic survival" challenges as the commissioned officers, the enlisted members have not only accepted the burden of

increased responsibility, they have become increasingly educated in an attempt to adequately carry out those responsibilities placed upon them. It is time that military compensation be re-examined and a new model must be established to remove the disparity between the officer and enlisted compensation tables by moving them closer together to accurately reflect the changing enlisted roles in relation to the overall military establishment. This will aid tremendously to help sustain the all-volunteer force.

Another key pay area is the Basic Allowance for Subsistence (BAS). 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 their meal card program (payment for the members residing in the dormitories to eat in base dining facilities). Also, DOD maintained that limiting the growth of BAS would allow the provision of BAS allowances to those residing in the dormitories—a reality that has yet to come about except in very rare cases—usually when it is inconvenient for the government to feed the troop due to his/her austere duty hours. When it is in the best interest of DOD, DOD complains that it cannot feed military members in their dining facilities at the allowance rate for BAS. Last year's Defense Bill even tied BAS to a food index. AFSA and its members believe that it is time to once again tie the annual growth of BAS to military pay increases.

We must:

—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 level without having to provide special subsidies in efforts to avoid admitting there are enlisted personnel eligible for food stamps.

—Tie the annual increase of BAS to the military pay raise percentages.

HOUSING AND HOUSING ALLOWANCES

Where a military member and his/her family live is dictated by a number of factors, usually not by the member's choice. Those deploying, of course, live where (and under whatever 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 which 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 or cause more out-of-pocket expenses for the military member.

For those who must live off-base, the provision of the Basic Allowance for Housing (BAH) is intended to account for the average of 85 percent of the members out-of-pocket housing expenses. This committee has recently taken strong 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, under the BAH standard, the only enlisted grade authorized a stand-alone dwelling is the very highest grade of "E–9." AFSA supports full funding of BAH, but maintains that BAH 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, enlisted members—especially the mid to lowest ranking (who are obviously paid the least)—must expend additional out-of-pocket dollars. A fact of the military institution is that privileges and benefits increase following the achievement of higher rank; however, BAH needs to be restructured to protect all military members and their families regardless of the member's rank.

Another inequity in the BAH arena is the difference in housing allowances paid to married members versus single members. While it is understood this difference is aimed at easing the burden on married military members, this is seen by members on both sides as unjust in light of equal compensation for equal work. The single member works side by side with the married member on a daily basis doing the exact same job. The single member willingly often sacrifices to volunteer for deployments and work holidays so that married members can have the opportunity to spend a little more time with their families. The single members do this out of a sense of esprit de corps and to help out their counterparts who happen to have a family. Furthermore, many single members (especially after attaining the grade of E–5) are forced to live off-base because there is not enough single or unaccompanied quarters available on-base. This is where the dissatisfaction, rightfully so, begins to appear. The single member must pay the same amount for a one-bedroom apartment as does the married member. This is not equal pay for equal work—it is discrimination. This fact often contributes to the single military member's decision to leave the military service. We ask that this committee eliminate this injustice by replacing the "with and without dependents" categories with one BAH category.

To improve housing and housing allowances, we ask this committee to:

—Ensure that military members' housing and housing allowances are adequate to cover actual housing cost.

—Restructure BAH to provide adequate housing in safe neighborhoods with quality schools for those members who must live off-base.

—Modify the housing standard that determines square footage, number of bedrooms, and apartment or stand alone dwelling to more closely coincide with average private sector standards.

—Eliminate the "With and Without dependents" categories and replace them with one category to provide more equal compensation for equal work accomplished.

MILITARY HEALTH CARE

Military health care and readiness are inseparable, and military members and their families must know that no matter where they are stationed or where the families live, their health care needs will be taken care of. In recent years, military family member, retiree and retiree family member medical and dental care have evolved from fully funded coverages to member-subsidized coverages. Members have noted these "DOD erosion-conscious" choices to lessen their overall benefit which was promised to them and their families. 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 needs, or must travel a distance to a health care facility for specialized care. It is important to note that the 106th Congress adopted legislation to allow for reimbursement of medically related travel expenses; however, to date funding has not been obtained. This legislation was seen as a monumental step in the right direction, and members are anxiously awaiting full implementation of the program. Without a doubt, medical care for self and family—while on active duty and after retirement—is one of the top priorities of our military members. The availability, or lack thereof, of quality medical care greatly influences the member's decision when deciding to "stay military" or look for better options in the private sector. This association asks for your support to fund medically related provisions that enhance the quality of life of the personnel who so greatly sacrifice for the defense of this great country.

RETIREMENT BENEFITS

One of the values of the enlisted corps—before "core values" were buzzwords—was "service before self." Thankfully many military members took this value seriously and decided to remain in the service to their country because of patriotism, their desire to make a difference in the world, and their dedication to and pride in their country. Regretfully, their country has not shown a reciprocal dedication to many of those who gave so much in defense of this country—those being the members who retired after 20 or more years of honorable service with a service connected disability. Retired members in this category have their retirement pay reduced dollar-for-dollar for each dollar they receive in veterans disability compensation. Any other disabled veteran, regardless of whether they continued to work for and eventually retire from the Federal Sector (as FBI agents, Civil Service employees, elected officials, etc.), State, City or County government, or any other form of employment receive their full veterans disability compensation and their full retirement pay.

It is our position that "retirement pay" is for extended and honorable service. It is also our position that "veterans disability compensation" is compensation for de-

creased functionality or suffering as a result of that service. We do not believe these two in any shape, form or fashion—regardless of the math used—equate to using the same period of service for similar benefits. Retirement pay and disability compensation are not similar benefits, they are as different as daylight and dark. Armed Forces' retirees see a disgrace in their country asking them to pay their disability compensation for injuries sustained in the defense of their country! We ask this committee to do the right thing and correct an injustice that has gone on far too long. This injustice can be corrected by adopting S. 170, The Retired Pay Restoration Act of 2001.

Another area where there is great concern among our membership is the reduction in benefits from 55 percent to 35 percent for those surviving spouses receiving annuities under the Survivors Benefits Plan (SBP) and entitled to Social Security benefits. Upon retirement, the military members who elected to participate in SBP had a portion of their retirement pay withheld for the purpose of paying for their surviving spouse's annuity. Enactment of S. 145 would, over a period of time through 2011, eliminate the offset and bring all SBP annuity recipients up to the same percentage level.

To show this country's dedication and compassion for its military retirees, we ask you to:

—Provide military retirees full concurrent receipt of their earned retirement pay and Veterans Disability Compensation by supporting S. 170 would do.

—Eliminate the SBP reduction surviving spouses face when they attain the age of 62 by supporting S.145.

EDUCATION

We should take action now to raise the value of the Montgomery G.I. Bill (MGIB), the military's primary tool for a successful post-military readjustment into civilian society. The MGIB should cover the cost of an average university, instead of an arbitrary dollar figure that has little to do with actual education costs. This should include adequate funding to cover books, tuition and fees toward a higher education for not only after separation, but also for those able to take classes while in the military. The better educated a member becomes, the better he/she can perform their increasingly difficult taskings and accept greater responsibilities.

Also, we ask this Congress to change the enrollment methods now in place. The first thing to do is immediately provide an opportunity, an open window, for all military members not enrolled in the MGIB to enroll in that program. The other enrollment change is to eliminate the one-time enrollment opportunity during basic training—when members can little afford to enroll and are so overwhelmed with information. We ask you to allow military members to enroll in the MGIB anytime during their careers. However, if only windows of opportunity for enrollment are to be used, a less than optimum option we recommend is to allow an opportunity for enrollment at each reenlistment point.

Additionally, we ask you to support legislation to change the policies that tend to push members away from the educational benefit. Policies such as requiring military members to contribute $1,200 toward their own educational "benefit." 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.

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. We should not be concerned that the MGIB benefit may be used if members are allowed to transfer the benefit, but instead encourage its use to provide for a better educated citizenry.

We ask that:

—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 be implemented.

—An open window for enrollment for in the MGIB be established.

—Eliminate the member's $1,200 enrollment fee and make the MGIB an earned benefit.

—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 members 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." Our military forces could not even come close to accomplishing the many and varied tasks levied upon them by our national military command authority without the members of the Air Reserve Components ([ARC] Guard and Reserve). The Citizen soldiers used to be standing ready in the background in case they were needed in an extreme national emergency. This is not the case today. The citizen soldier is working side-by-side with their active duty counterparts on an almost daily basis. It is safe to say, that our military forces could not meet mission requirements without the constant dedication and support from the ARCs. In addition to facing many of the same challenges active duty members face, ARC members are still not totally recognized for all their sacrifices. Therefore, additional funding must be made available to provide the ARC members with adequate health care, full benefits, comparable retirement benefits, and protection of their families. Their readiness is critical to our nation's defense and attainment of these goals for ARC members is important.

Just as with the active duty force, increased mission taskings are coming despite plans for continued cutbacks in Reserve forces end strengths. Furthermore, 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. Proposed tax credits as in S. 540, Reserve Component Tax Assistance Act of 2001, if implemented for employers and self-employed ARC members would be great gestures on the part of our nation for their support to our ARC members and more importantly-the defense of this country.

In order to meet the readiness needs of today's ARC 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.

—Provide comparable retirement benefits at the point of retirement instead of at age 60.

CLOSURE

We not only ask members of our military forces to accomplish great things under austere conditions, but to be ready to accomplish those great things anywhere in the world on a few hours notice. These members sacrifice many facets of their family lives. We ask them to sacrifice many things most Americans take for granted. We—more often than not—prevent them from owning a home due to change-of-assignment moves. We force them to lose money in every change-of-station move because funds provided do not cover actual cost and low weight allowances force them to get rid of items they will have to replace at their new duty location. We ask them to miss the births of their children, to miss watching their children take their first steps, to miss seeing the accomplishments of their children as their children grow up and become adults. The military member can only hope that their families will understand that all their sacrifices are for a higher calling—the protection of the freedoms America holds so dearly. Service before self is a value few can really say they understand. America's military members and their families, can beyond a shadow of a doubt, honestly say they understand that value.

Mr. Chairman, AFSA 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. We also ask that while you're deliberating the appropriation requirements of the fiscal year 2002 Defense Bill, its personnel programs, and its role in attracting and retaining those who serve, that you pay particular attention to the quality of the military lifestyle. A lifestyle that inherently brings sacrifices that should not be compounded through the loss or reduction of benefits, pay, education or an unjust expectation that they someday pay their own disability compensation. We trust you to take care of our men and women in uniform and their families by maintaining current benefits and ensuring future benefits—to include retirement benefits—commensurate with the sacrifices we ask of our active and Air Reserve Component members. 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. Dr. Bursell and Mr. Violi.

STATEMENTS OF:

SVEN BURSELL, M.D., JOSLIN DIABETES CENTER
RON VIOLI, JOSLIN DIABETES CENTER

Mr. VIOLI. Thank you, Mr. Chairman. I am Ron Violi with Children's Hospital. I am here with Dr. Bursell from Joslin Diabetes. I want to thank you for having us here today.

As we have shared with you in the past, Dr. Massimo Trucco was the first scientist to discover the link between a common childhood virus and the onset of juvenile diabetes. We now know through published results that the Coxsackie B Virus (CVB), or hand, foot, and mouth virus triggers the onset of type 1 diabetes in children and adults who are genetically at risk for the development of this disease. This new research, which has been conducted in collaboration with Army medical personnel, is bringing us one step closer to developing a vaccine against type 1 diabetes.

For fiscal year 2002, we are respectfully requesting $7.6 million in Federal funding to expand the joint diabetes project by pursuing a program that will allow us to screen military personnel and their dependents for genetic susceptibility to diabetes. Our proposal has three broad goals:

First, by screening larger populations we intend to improve our ability to determine who will actually develop diabetes. Currently we can identify who is susceptible and who is resistant with about an 85 percent accuracy.

Secondly, we plan to use Joslin's telemedicine network to communicate information about individuals at risk for developing diabetes, both to health care professionals and families. In the future, this will be especially useful for caring for minority populations, such as the American Indians in Alaska or New Mexico, where there is a higher proportion of incidence of diabetes.

Finally, we are offering appropriate counseling to limit the psychological and behavioral effects that this information will have.

We envision this to be a two-phased project. The first phase will evaluate 5,000 families from ten separate Army bases. Based on the results from phase one, the research protocols will be refined, with the intention of implementing a larger-scale screening program that would be made available on all Army bases.

As part of our collaboration with Joslin, their telemedicine infrastructure will be utilized to centralize the data stored from our studies. By doing so, we can quickly develop a large shared database with which we can establish any association that may exist between genetic risk and a more rapid development of diabetes complications.

The bottom line advantage to this analysis is that patients that are at risk for developing diabetes or diabetic complications may be detected early and managed more appropriately via telemedicine, thus improving their medical care, reducing complications, and lowering health care costs.

Mr. Chairman, we are pleased to be part of this project with the Department of Defense and appreciate your and Senator Specter's continuing support again this year.

Sven.

Dr. BURSELL. Yes. I would also like to express our thanks to the committee for their support and leadership. The Joslin Vision Net-

work (JVN) project represents a translation project leveraging telemedicine technologies. The mission is to translate results from 25 years of national multi-center clinical trials in diabetic retinopathy into clinical practice and make this evidence-based medical care available to all diabetic patients.

As part of the project, by the end of December 2001 we will have deployed a total of 31 remote JVN imaging sites and 8 centralized reading centers. Additionally, to date we have trained and certified JVN images, 16 readers, and 3 senior adjudicators. For fiscal year 2002 funding, taking this number of imaging sites, with each imaging site potentially being able to image 30 patients per day, we would be able to access 358,800 diabetic patients per year. The physicians who conduct the imaging reading look at this in terms of over 700,000 eye examinations per year because you have to examine each eye separately.

We are also working with the participants in the DOD and the VA towards the development of a comprehensive diabetes management program in a virtual environment. With fiscal year 2002 funding of $7.6 million, we anticipate deploying a further 15 imaging stations at 10 different sites.

I would also like to highlight briefly the collaboration with Children's Hospital of Pittsburgh that Mr. Violi referred to. Again, we are excited about this because it will focus on the analysis and potential identification of genes associated with the development and complications of diabetes, and we will leverage the JVN telemedicine platform and the work done for retinopathy assessment and patient education.

Again, thank you very much for your attention and support, sir.

Senator STEVENS. Thank you very much, gentlemen.

[The statement follows:]

PREPARED STATEMENT OF DR. SVEN BURSELL

INTRODUCTION

Mr. Chairman and Members of the Committee, we would like to thank you for the opportunity to appear before you. I am Dr. Sven Bursell of the Joslin Diabetes Center, and joining me today to present an update on the Joint Diabetes Project is Ronald Violi, president and chief executive officer of Children's Hospital of Pittsburgh. We are here to provide information on our work with the Departments of Defense and Veteran's Affairs on the health concerns related to diabetes.

The establishment of the Joint Diabetes Project has allowed each of our institutions to contribute its unique strengths and scientific talents to this partnership. Three years ago, you provided us with the opportunity to combine our resources to offer the most advanced detection, treatment, prevention and basic and applied research approaches to managing diabetes and its resulting complications.

We are excited about the progress that we have made to date and remain enthusiastic and optimistic about our future collaborative endeavors. Our proposal for third year funding will allow us to continue to provide the most balanced approaches available to addressing Type 1 and Type 2 diabetes (or juvenile and adult onset diabetes, respectively).

Children's Hospital of Pittsburgh Plan for Fiscal Year 2002

As we have shared with you before, our principal investigator, Dr. Massimo Trucco, was the first scientist to discover an immunologic link between a common childhood virus and the onset of juvenile diabetes. We now know through our recently published results that the particular viral infection in which we are interested, CVB, or hand, foot and mouth virus, triggers the onset of Type 1 diabetes in children and adults who are genetically at-risk for developing the disease. This research further emphasizes the involvement of viruses in initiating autoimmune responses that cause the onset of diabetes.

Through our work with the Army's Telemedicine and Advanced Technology Research Center (TATRC), we propose to continue our work with Army medical personnel and with specialists in Endocrinology at Walter Reed Army Medical Center to further isolate segments of the CVB virus with the intent of developing a vaccine against type 1 diabetes.

Last year, to assist with these efforts, we began a collaborative initiative between the National Science Foundation's Science and Technology Center located at Carnegie Mellon University in Pittsburgh and with experts in microarray technology at the University of Tuebingen in Germany. This partnership has provided us with the ability to use advanced medical technology to screen thousands of blood samples each month to determine an individual's genetic susceptibility to diabetes and other autoimmune diseases.

Using this technology, these blood tests can be performed in less than 30 minutes and at a very reduced cost, allowing larger populations to be screened more effectively. Our ultimate goal is that once at-risk individuals are identified, they can be followed more closely and ultimately vaccinated against type 1 diabetes.

FISCAL YEAR 2002 PROGRAM OVERVIEW

For fiscal year 2002, we look to expand upon the Joint Diabetes Project funded by Congress through the Department of Defense by pursuing a program that will allow us to embark upon an outreach project that will enable us to screen Army personnel, and later other military personnel and their dependents, for genetic susceptibility to diabetes.

Using the advanced testing technology that we discussed, we feel that we are uniquely qualified to provide rapid and cost-effective diabetes screenings for large military populations.

Once these screenings have occurred, we can offer the most current diabetes care, including psychological, emotional and clinical care components to military personnel regardless of their location via the use of telemedicine. In the future, this methodology will be especially useful among minority populations such as the American Indians in Alaska or in New Mexico where there is a higher proportional incidence of diabetes.

This proposed project has three broad goals:

—First, by screening larger populations we intend to improve our ability to determine who will develop diabetes. Currently, we can identify who is susceptible and who is resistant with an accuracy rating of between 80 and 85 percent.

—Second, we plan to utilize the telemedicine network that has been already well established by Joslin to communicate information about an individual's risk of developing diabetes both to health care professionals and to families.

—And finally, we will tailor appropriate counseling to limit the psychosocial and behavioral effects that this information will have on individuals and family members.

We envision this to be a two-phased project. The first phase will allow for the evaluation of 5,000 families from 10 Army bases, and would include all children between 7 and 16 years of age. On the basis of the results received from the first phase, the research protocols will be refined with the intention of implementing a larger-scale screening program that would be made available at all Army bases.

As part of our collaboration with Joslin, their telemedicine infrastructure will be utilized to centralize the data stored from our studies. In this way, we can quickly develop a large shared database of genetic information from which we can perform the required analysis to establish any association that may exist between genetic risk and a more rapid development and/or progression of diabetic complications, such as retinopathy, cardiovascular disease and kidney disease.

The bottom line advantage to this analysis is that patients who are at-risk for developing diabetes or diabetic patients who are at increased risk for developing complications could be detected early enough so as to be appropriately managed via telemedicine, thus improving their medical care, reducing complications and lowering the costs associated with their care.

FISCAL YEAR 2002 CHP/DIABETES INSTITUTE OF PITTSBURGH FUNDING REQUEST—$7,600,000

The diabetes research program at Children's Hospital of Pittsburgh has become a world-class, state-of-the-art research center that will have a tremendous impact at both the regional and national levels.

For fiscal year 2002, we are respectfully requesting $7.6 million in federal funding so that we may continue our efforts and expand upon the important work that we have begun. The proposed budget will consider expenditures associated with:

New Advanced Technology to Improve Prediction and Prevention of Type 1 Diabetes

Salary Support	$500,000
Equipment (laboratory and electronic)	2,500,000
Supplies/Reagents	1,500,000
Management Cost (mailing, receiving, bar-coding, storing blood samples)	1,500,000
CHP & Joslin Joint Program (mapping of genes predisposed to diabetes complications)	500,000
DOD Administrative Fee	1,100,000
Total CHP/Diabetes Project Costs	7,600,000

JOSLIN DIABETES CENTER

Fiscal Year 2001 Status Report

JVN Deployment.—By December 2001 we will have deployed a total of 8 independent remote JVN imaging sites and 5 centralized reading center sites operating off 2 independent servers in the Department of Defense Infrastructure concentrating on sites in Hawaii, Walter Reed Army Medical Center and Alaska at Elmendorf Air Force Base and Bassett Army Medical Center. In the VA system we will have deployed a total of 10 remote imaging sites, 3 reading center sites operating off 2 independent servers and at the Joslin Diabetes Center we will have 7 imaging sites and 4 reading center sites operating of the Joslin JVN server for a total of 37 separate sites operating the JVN system. Additionally, a total of 21 JVN imagers, 16 JVN readers and 3 senior JVN adjudicators have been trained and certified throughout the participating organizations.

JVN Validation.—The JVN validation study has been completed and the results published in the March issue of Ophthalmology. The results demonstrated the equivalence, with respect to level of diabetic retinopathy assessment, between JVN digital video imaging through a non-dilated pupil to the current clinical gold standard of the Early Treatment Diabetic Retinopathy Study protocol of dilated 7 stereo standard field 35-mm photography. In addition the above prestigious peer reviewed publication the JVN studies have resulted in a further 5 peer reviewed publications and a total of 10 abstracts accepted for presentation at the Association for Research in Vision and Ophthalmology, American Diabetes Association, and American Telemedicine Association national meetings. Additionally, the ATA has devoted a symposium for the 2001 meeting dedicated to the JVN system with an opportunity for participants from all organizations to present results in a focused forum.

JVN Application Enhancement.—The enhancements to the JVN application will be tested and completed by March 31, 2001. This next generation JVN application is developed using totally non-proprietary hardware and software. Workstations are now standard PCs with MicroSoft 2000 operating systems interfaced to the Agfa PACS environment. The system is fully DICOM and HL7 compliant as well as being compliant to the latest HIPAA security standards. The development off the Agfa PACS environment facilitates direct interfaces to the DOD CHS and VA VISTA medical record systems. Thus the JVN system becomes an integrated component of the DOD and VA patient medical record system. Additionally, the JVN system is operational over the internet with the appropriate securities implemented. The deployments in 2001 will be performed so as to develop a proof-of-concept model for widespread, cost effective, and sustainable deployment and support.

Deployment of the Advanced System.—The prototype of the new non-mydriatic retinal imaging system has been completed and will undergo an iterative cycle of testing and refinement during the rest of 2001. The rationale for this development effort was to enable a portable and less expensive retinal imaging system that would overcome the current limitations of the commercially available models. The portability is a critical requirement for mobile operations to remote communities as well as in the DOD. The automated reading center application is also being readied for deployment. The JVN has been working with an image analysis vendor to develop this application. The first phase of the application has been developed and will be undergoing validation testing in April using the JVN data base of 48,000 retinal images that have already undergone manual grading for diabetic retinopathy. If the validation tests prove to be positive then the application will be deployed with all JVN reading center systems. The application is currently designed to automatically detect any abnormalities in the retinal images. It is anticipated that the implementation of this application will reduce the reading center workload by at least 50 percent.

COLLABORATIVE PROGRAM WITH CHILDREN'S HOSPITAL OF PITTSBURGH

An initial symposium that includes investigators from the JVN and Children's Hospital of Pittsburgh will be hosted by the VA as part of their National Diabetes meeting on March 28, 2001. The deliverable for this meeting is consensus agreement on a formalized collaborative program that leverages the telemedicine experience of the JVN and the immunogenetics expertise of Children's Hospital of Pittsburgh in the devlopment of a program that can significantly impact on the care of diabetic patients.

Fiscal Year 2002 Objectives

Deployment.—We anticipate that the current level of funding for 2002 will allow us provide support for existing JVN systems and to target new deployments for 15 additional JVN systems at 10 different sites that will be identified in collaboration with the participating agencies. This will make a total of 22 sites deployed through the DOD and VA that will be operating the JVN system.

JVN Application Enhancements.—There will be ongoing development work to continue enhancements to the JVN platform. These enhancements will include incorporation of a module to facilitate rigorous clinical research studies in diabetic eye disease, to validate JVN imaging for the detection of other eye diseases such as glaucoma and age related macula degeneration, and to incorporate application enhancements based on user feedback.

Comprehensive Diabetes Management program.—Work will be continuing for the development of the appropriate modules that will be deployed and implemented in the web-based comprehensive diabetes management program. The development of these modularized components is vital to user acceptance as modularization will facilitate customization to meet the specific needs of each practice. It is anticipated that the development of the interactive web-based education and behavior modules will provide the largest potential benefit with respect to motivating patients to set reasonable goals for their management of diabetes and thus maximize the clinical benefit.

Deployment of the Advanced System.—We will incorporate full automation into the new retinal imaging system. This will facilitate the imaging of the different fields required for assessment of level of diabetic retinopathy. Thus it is anticipated that the retinal imaging system based on retinal tracking and translation of the optical system be capable of acquiring all retinal images without having the patient change fixation. This will reduce the time for retinal imaging and significantly increase patient throughput. We will also continue our development efforts to enhance the capability of the automated retinal reading application to detection of specific types of retinal lesions. This will further enhance the efficiency and reduce the resource load that would be needed to staff a JVN reading center.

COLLABORATIVE PROGRAM WITH CHILDREN'S HOSPITAL OF PITTSBURGH

The main area of potential collaboration would be in the identification of genes associated with the risk for diabetic complications. This is important as we know that some diabetic patients will develop complications much more rapidly than other diabetic patients who are comparably aged with comparable glycemic control. This fact would implicate a genetic component associated with a risk for developing diabetic complications. Thus it becomes logical to leverage the expertise at Pittsburgh with respect to immunogenetics and genechip technologies and Joslin's expertise with gene analysis and JVN technology to undertake a study involving gene expression associated with an increased risk for development of diabetic complications such as diabetic retinopathy with a primary focus on type 2 diabetic patients.

Joslin Diabetes Center Fiscal Year 2002 Budget

Joslin expenses and personnel costs, including Equipment purchases for DOD ownership	$3,628,000
DOD/VA expenses and personnel costs	2,560,000
Management and fees extracted by DOD	912,000
Collaborative research with CHP	500,000
Total, Joslin Diabetes Center	7,600,000

SUMMARY

For fiscal year 2002, federal funding for the Joint Diabetes Project will allow both Joslin Diabetes Center and Children's Hospital of Pittsburgh to continue their work to improve the diagnosis and treatment of enlisted personnel and their dependents

with diabetes. Through concentration of efforts and cutting edge research, it is our intent to ultimately identify a vaccine against and a cure for the disease.

Joint Diabetes Project, Fiscal Year 2002 Funding

Joslin Diabetes Center	$7,600,000
Children's Hospital of Pittsburgh	7,600,000
Total Program	15,200,000

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. Please know that we would be appreciative of your continued support again this year. At this time, we would be pleased to answer any questions from you or any other Members of the Committee.

Senator STEVENS. Our next witness is Chief Master Sergeant Olanoff.

STATEMENT OF CHIEF MASTER SERGEANT MARK H. OLANOFF, U.S. AIR FORCE [RETIRED], NATIONAL LEGISLATIVE DIRECTOR, THE RETIRED ENLISTED ASSOCIATION

Mr. OLANOFF. Good morning, Mr. Chairman. I know that the time is short. We have submitted our statement and hopefully you and your staff will have time to read it. But I do want to thank you, and I am sure you remember from the last couple years of us coming here, and many of us are back, about the promise. Well, I am sure you are aware that we worked with Senator Warner, with the authorizing committee, and you know the TRICARE for Life happened and the senior pharmacy benefit happened and this committee funded it, and I would like to thank you and your ranking member Senator Inouye for all your help.

I am sure you are aware there still are some shortfalls in military health care, but I think that they are going to be addressed and I think that there is going to be a supplemental that you are going to consider later.

However, I want to bring up two issues for this year for the committee to really look at and consider. One of the previous speakers mentioned the fact about the promise of retired pay, and this is another issue that we realize that we have to go back to Senator Warner and the Armed Services Committee authorizers to get authorization for you to fund it. However, I would like you to know that Senate Bill 170, a bipartisan bill introduced by Senator Reid, 10 members of this subcommittee are co-sponsors, 16 of the full committee, Appropriations Committee, are co-sponsors, and a total of 59 of your colleagues are co-sponsors of this bill.

So there is a lot of momentum to restore the retired pay. This is an injustice that has been going on for many, many years, and we have had large bipartisan success in the House. Now we have the success in the Senate and we are hopeful this year that the Armed Services Committee will report a bill out to you so you can fund the restoration of retired pay so our retired military veterans do not have to pay for their own VA disability.

Mr. Chairman, the other issue is the survivor benefits plan. I do not know how familiar you are with this, but there are a couple of bills out there, one by Senator Thurmond and one by Senator Smith. Basically, the problem with this is that widows who thought that they were going to get a 55 percent survivor benefit when their spouses passed away, they find out after the fact that this

benefit is lowered from 55 percent to 35 percent, and the two bills ask for an increase to get them back up to 55 percent. One bill would do it over a phase-in period over about 6 or 7 years. Senator Smith's bill would implement it immediately.

So those are the two big issues for us this year. Again, Mr. Chairman, we really thank you for what you have done over the last few years and we look forward to working with you in the future. Thank you.

[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. TREA commends the Chairman for his help with the funding of the Defense Health Program and the new provisions of TRICARE for Life. We are sure that the chairman remembers the discussion of last year and his challenge to us in working with the Armed Services Committee to determine the promises of healthcare for military retirees. Again, we salute you for the fine effort.

HEALTHCARE

TRICARE

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.

TRICARE Standard (CHAMPUS) reimbursement levels are still much too 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 sees 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 TRICARE subcontractor would pay the claim. 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", and TREA understands that DOD is currently working to implement improvements effective October 2002. As stated in a December 11, 2000 TriCare press release, "the TriCare Management Activity (TMA), DOD's designee for evaluating the new rule, has formed a group of experts from its staff and uniformed services into an Integrated Program Team (IPT). The IPT is currently studying how best to apply these standards to the eight administrative transactions used routinely in health care administration, including claims processing." TREA appreciates this effort and requests that this committee continues to stay abreast to this work in progress.

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.

TRICARE for Life (TFL)

TRICARE for Life is part of the Fiscal Year 2001 National Defense Authorization Act (NDAA) to be effective October 1, 2001. We applaud the President and the Congress (Budget Resolution) for including the additional $3.9 billion needed to fund

TFL for fiscal year 2002 and we now ask that this subcommittee appropriate the money.

TRICARE Standard Improvements

TRICARE Standard, the fee-for-service option, needs improvement to at least equal the quality and standard of care as provided under the Federal Employee Health Benefits Program (FEHBP) standard fee-for-service by:

—Eliminating the need for Non-availability statements (NAS) from military treatment facilities and clinics and completely eliminate the requirement for pre-authorization.

—Eliminating the 115 percent billing limit when TRICARE Standard is second payer to other health insurance.

Lowered Catastrophic Caps Funding

Additional funding is required to cover the lowered catastrophic caps for TriCare users. Fiscal Year 2001 DOD Defense Authorization Act lowered the cap from $7,500 to $3,000 but there is currently no funding to pay for it. DOD's request that TriCare participants keep the documentation, ask their carriers to wait until DOD pays them is unfortunate. The lowered cap is law and TREA requests that it be funded.

Medicare Part B Waiver for Military Retiree 65+

The recently passed TFL requires the participant to be on Medicare Part B. Most retirees who settled near a military treatment facility (MTF) were counseled by MTF advisors not to enroll in Part "B" because the MTF would provide 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 that this committee will work with your colleagues to help authorize and then appropriate 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, and most importantly, TriCare-for-Life, as well 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 too costly. We realize that the authorizing committee must provide legislative relief, however, we ask for this committee to support this effort.

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 offset. Last year, the Senate included legislation, outlined in S. 145 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 2001 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. 305 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 2002, 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 expand 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 to $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. 170, sponsored by Senator Reid, is complete concurrent receipt of military retirement pay and VA disability compensation.

Mr. Chairman, 56 of your colleagues in the U.S. Senate are now co-sponsors of S. 170 including 10 on this subcommittee and a total of 16 on the full Appropriations Committee which also includes your ranking member, Sen. Inouye and we ask for your consideration in this matter.

Senator STEVENS. Thank you. I will say, however, that the amount of funding we have got now for retired persons is over 6 percent of the budget. If we grant your request it will be over 10 percent of the budget for defense. We did not use to take retired benefits out of the current year funding for the Department of Defense. That is going to grow as the years go on and I think we will all have to think about how to do that.

We ought to be looking to a system which funds retirement on an annual basis, as we do the civil service. But we have not done that. I commend to you the thought of trying to figure out how to do it.

When that reaches more than 10 percent a year, it will mean that we will be putting more money into those people who have served in the past than we are in training the people who are coming in. That is self-defeating. So I think we have to find a new system.

Thank you very much.

Mr. OLANOFF. Thank you, Mr. Chairman.

Senator STEVENS. They tell me I must go now. We will try to get back. Thank you very much.

Senator INOUYE [presiding]. The chair recognizes Dr. William Nelson, the Association for the Cure of Cancer of the Prostate. Dr. Nelson will be accompanied by Dr. Richard Atkins.

STATEMENT OF WILLIAM G. NELSON, Ph.D., ASSOCIATION FOR THE CURE OF CANCER OF THE PROSTATE

ACCOMPANIED BY RICHARD N. ATKINS, M.D., NATIONAL PROSTATE CANCER COALITION

Dr. ATKINS. Mr. Chairman, on behalf of CAPCURE and the National Prostate Cancer Coalition, I am delighted to introduce Dr. Bill Nelson from Johns Hopkins, one of the country's outstanding young biomedical researchers.

Dr. NELSON. Thank you, and thank you very much, Mr. Chairman. I am a cancer research scientist and clinical investigator at Johns Hopkins and I have dedicated my life to searching for new opportunities to beat prostate cancer. I am here today to speak in support of the invaluable contributions that are now made each year by the Department of Defense prostate cancer research programs. To that end, I would like to ask your committee to provide $135 million to support the Congressionally Directed Medical Research Program (CDMRP), in prostate cancer for the fiscal year 2002, and also ask that you maintain sufficient funding to support the intramural prostate cancer research program at the Walter Reed Army Hospital.

I know that you, Mr. Chairman, and all the members of your committee share my concern that prostate cancer has become the most commonly diagnosed non-skin cancer for men in the United States. This year more than 198,000 men, or three times the number of casualties in the 10 years of the Vietnam War, will learn that they have prostate cancer. Nearly 32,000 men, or the size of an entire corps of the United States Army, will lose their lives to prostate cancer, making prostate cancer the second most common cause of cancer death among men.

Why do we need a national investment? This country's investment in all of cancer research pales in comparison to the dark and devastating specter of cancer, in that less than one-thirtieth of what we spent on cancer care goes to research to find new treatments. Just this month, the opportunities are really arising. Just this month, we have marveled at the appearance of a new drug called Glivak, a Novartis Pharmaceutical pill that treats chronic myelogenous leukemia that was developed by a colleague of mine, Dr. Brian Druker, at the University of Oregon. That disease, once inevitably fatal, may be curable in as many as 90 percent of the patients who suffer from it.

Now, remarkably, this discovery was made and translated to the clinic in less than a decade and, although we know that not every miracle for cancer patients is going to move as quickly, I believe that if we made a greater national investment in such discoveries we could accelerate progress greatly.

Why the military? Prostate cancer poses a grave risk to our men in uniform and, while we do not know the full impact of prostate cancer on our military service, we can posit some estimates. Eighty-five percent of active and reserve uniformed service personnel are men, constituting about two million individuals. If their prostate cancer risks are the average expected, that means that more than 300,000 military men will be diagnosed with prostate cancer during their lifetimes.

But the economic and social impact of the disease does not stop there. There are more than eight million people in the Department of Defense health network worldwide. The cost of prostate cancer in terms of direct health care expenditures and human capital over time could be enormous.

Why is the Department of Defense program the right program for prostate cancer research? The CDMRP prostate cancer program is the only program that focuses specifically on prostate cancer, and

there are four features of this funding strategy that I would like to comment on.

First, the funding strategy adopted by the CDMRP is both innovative and effective. An example are the idea development awards initiatives, which provide funding to stimulate venture research, recognizing and rewarding speculative but promising ideas. These projects often do not qualify for funds from other Federal sources because of an abundance of proof of principle evidence is usually required before those funds are awarded. However, since these ideas are at the cutting edge of research they often bring us the greatest returns. It is worth noting that Dr. Druker has said that he did not get his first three or four research grants.

The second point, the CDMRP is committed to correcting the unequal burden of prostate cancer on America's African American men and their families through its health disparity awards. It is providing funds for research and training to help solve this problem and it is offering collaborative research grants to historically black colleges and universities.

Third, the CDMRP is committed to accelerating clinical trials. Fiscal year 2001 marks the first time they have had sufficient funding to support clinical research. However, we believe that the potential impact is echoed by the successes of the CDMRP program for breast cancer research, which hastened the development of Herseptin, an important tool in breast cancer treatment.

Finally and perhaps most important, the CDMRP is committed to developing new prostate cancer research consortia and it needs more funding to pull this off. The CDMRP research development consortia awards bring together researchers from two or more institutions to collaborate on research focusing on a common theme. It is widely regarded that the establishment of centers of research excellence of this sort that balance research collaboration and competition is the best way to beat the disease. That is also one way the DOD efforts can synergize with the efforts at the National Cancer Institute.

In conclusion, the CDMRP is an important source of research funding for prostate cancer. Over the past few years, the growing commitment of Federal funds that Congress has appropriated to beat prostate cancer and other serious cancers has begun to make a difference. But I believe we can do more, we must do more, and with the right investments I am confident that we can and will beat prostate cancer.

So on behalf of the millions of American men and their family members whose lives have been touched and all too often devastated by prostate cancer, I thank you for your continuing commitment to eradicate it. Thank you very much, Mr. Chairman.

[The statement follows:]

PREPARED STATEMENT OF WILLIAM G. NELSON, PH.D.

INTRODUCTION

Mr. Chairman, my name is Bill Nelson. I am Associate Professor of Urology, Oncology, Pharmacology, Medicine and Environmental Health Sciences at Johns Hopkins University and to my left is Dr. Richard Atkins, the Vice Chairman and Chief Operating Officer of the National Prostate Cancer Coalition. We are pleased to appear before you on behalf of both of our organizations and thank you for your time and commitment to the issues that surround prostate cancer.

As a research scientist and clinical investigator, I spend my life searching for new opportunities to beat prostate cancer, and I am here to support the incalculable contributions that are now made annually by the Department of Defense prostate cancer research programs. They must continue, and they must grow. To that end, I ask your committee to provide $135 million for the Congressionally Directed Medical Research Program (CDMRP) in prostate cancer in fiscal year 2002. On behalf of the National Prostate Cancer Coalition and CaP CURE, I also ask that you maintain sufficient funding for the intramural prostate cancer research program at Walter Reed Army Hospital.

I know that you, Mr. Chairman, and members of this committee share my concern that prostate cancer remains the most commonly diagnosed nonskin cancer in America. More than 198,000 men will learn that they have the disease in 2001. Nearly 32,000 men will lose their lives to prostate cancer this year, making it the second most common cause of cancer death among men. Those statistics translate into devastating realities for men and families across this country.

AFFECTING THE NATION'S ECONOMY

Prostate cancer will affect one in six men in the United States during his lifetime. More than 25 percent of those battling this disease are under the age of 65, prime years of productivity for families and for this nation. As baby boomers continue to pass the threshold of age 50, the number of Americans impacted by cancer—and prostate cancer—is expected to grow. If unchecked during the next decade, cancer incidence and mortality rates could increase by 25 percent to 30 percent. Cancer already costs this nation more than $110 billion a year, a figure that might exceed $200 billion annually by 2010.

MAKING A NATIONAL INVESTMENT

The country's investment in cancer research pales in comparison: less than about one-thirtieth of what we spend on cancer care goes into research to find new treatments. This month, we celebrated the historic arrival of a drug called Gleevec, Novartis Pharmaceuticals' landmark new treatment for chronic myelogenous leukemia. That disease, inevitably fatal, may now be curable for more than 90 percent of patients who suffer from it. Gleevec began as a dream in the laboratory of my fellow medical oncologist, Brian Druker. How much time did it take to translate Brian's dream into a reality for thousands of patients? Less than a decade. Not every miracle for cancer patients is going to occur as quickly, but many could if there were a greater national investment in such discoveries.

During the past decade, about five cents of every federal cancer research dollar has been directed to prostate cancer, a disproportionate sum for a disease that has accounted for about 15 percent of all new cancer cases and 15 percent of male cancer deaths. Congress is beginning to correct that inequity, and I thank you for it. But, we must do more.

DESTROYING AFRICAN AMERICAN FAMILIES

We must do more because prostate cancer unequally impacts America's African American families. Prostate cancer incidence rates are 35 percent to 50 percent greater in African American men than among white males, and death rates are twice as high.

DETECTING THE GENETIC LINK

We must do more because prostate cancer unequally impacts men who have close relatives with the disease. If a man has one close relative with prostate cancer, his risk of the disease is double. With two close relatives, his risk is fivefold. Should he have three close relatives, his likelihood of a prostate cancer diagnosis is nearly certain.

PROTECTING MEN IN THE MILITARY

We must do more because prostate cancer also poses a risk to our men in uniform. While we don't know the full impact of prostate cancer on our military service, we can posit some estimates. About 85 percent of active and reserve uniformed service members are male, about two million individuals. If their risks are only average expectable, that means that more than 300,000 men will be diagnosed with prostate cancer during their lifetimes. But the economic and social ramifications on the Department of Defense don't stop there. There are more than eight million people in the defense health network worldwide. The cost of human and fiscal capital, over

time, could be enormous. That's one compelling reason to encourage the CDMRP program in prostate cancer to thrive.

EXPANDING RESEARCH DEVELOPMENT

The CDMRP program must thrive because it is also unique. Providing $135 million to the program in fiscal year 2002 expands its special contributions to research idea development, remedies health disparities, provides for research consortium development and enhances clinical trials—along with funds to support postdoctoral trainees and young investigators.

MAKING ORGAN SITE SPECIFIC RESEARCH WORK

Within the research resources of the federal government, the CDMRP prostate cancer program is the only one that is organ site specific. I can personally attest to the impact the program has had. Since its inception in 1997, CDMRP has made fourteen research awards at Johns Hopkins, more than $4.2 million, in most of its designated categories. As they are at other institutions, these awards are non-duplicative of other funding sources.

First, CDMRP is committed to innovation through its "Idea Development Awards." These awards stimulate "venture research," projects that reward often speculative but promising ideas. In general, these projects would not qualify for grants from other federal resources, wherein demonstration of "proof of principle" is generally required. Since these ideas are good, but speculative, they often forecast great returns on the investment made. At Hopkins, for example, one Idea Development awardee is studying potential drug targeting on a specific enzyme affecting prostate cancer cells. This methodology is similar to the one that led to a great payoff in Brian Druker's laboratory for leukemia.

CDMRP is committed to correct the unequal burden of prostate cancer on America's African American families through its "Health Disparity Awards." It is providing funds for research and training to help solve the problem, and it is offering collaborative research grants to Historically Black Colleges and Universities (HBCU), so that, in partnership with other universities and medical centers, prostate cancer research opportunities at minority institutions are strengthened. At Hopkins, colleagues are searching for biomarkers that isolate aggressive prostate cancer in African American men, developing survey measures targeting inner-city African American men and studying the potential role of African American churches in prostate cancer prevention.

CDMRP is committed to accelerate clinical trials. Fiscal year 2001 is the first time that CDMRP has received sufficient funding in prostate cancer to support clinical research. But the potential impact is echoed by the successes of the sister CDMRP program for breast cancer research, which uniquely hastened the availability of Herceptin, a drug targeted to impact the specific expression of a protein in breast cancer cells. The April 1998 business plan submitted by CDMRP to Congress indicates that, at the then forecasted full funding level of $200 million, the prostate cancer research program could engage in significant support for clinical trials. An appropriation of $135 million next year will energize that effort.

Perhaps most important, CDMRP is committed to develop new prostate cancer research consortia, and it needs more funding to make these opportunities thrive. The CDMRP consortium development awards bring researchers together from two or more institutions to collaborate on research that engages a common theme. Why is this important? It is widely recognized that the establishment of centers of research excellence hasten efforts to beat any serious disease. These awards start the process through the creation of "virtual centers of excellence," and they may well pave the way for any single institution to receive a SPORE (special program of research excellence) grant from the National Cancer Institute (NCI) in future years. That's one significant way that research support at DOD and research support at NCI synergize a common aim.

Finally, CDMRP fills another important niche in this nation's research efforts to find new treatments for prostate cancer. It has become an important contributor to the market forces governing prostate cancer research. Those of us who enter this field frequently come into it with significant debt accrued from the expensive years of medical training. To stay in prostate cancer research, access to research funding is crucial. My first three attempts to secure funding from the National Institutes of Health (NIH) failed, but there were no alternative resources at the time.

CONCLUSION

CDMRP is one important alternative resource. While maintaining high standards of peer review, its application process is far less cumbersome than that of other fed-

eral agencies. Its focus on breeding young investigators and nourishing creative ideas is singular. A good friend, Jonathan Simons, and a former colleague at Johns Hopkins, is now director of the Winship Cancer Institute of Emory University in Atlanta. When Jonathan was considering prostate cancer research as a vocation, his friends outside the field told him he would be committing "professional suicide." Funds weren't there to sustain a career.

The CDMRP program has begun to change that. Indeed, Congress's growing commitment of federal funds to beat this disease is making a big difference. While prostate cancer may not yet be an all-alluring field of dreams among biomedical research opportunities, its growth is forecasting great new developments. With the right investments, we can—and we will—beat prostate cancer.

On behalf of the millions of American men and family members whose lives have been touched—and too often devastated—by this disease, I thank you for your continuing commitment to eradicate it.

Thank you, Mr. Chairman and members of the committee.

Senator INOUYE. Doctor, you can be assured that we will do our best.

Dr. NELSON. Thank you.

Senator INOUYE. Thank you very much.

Now may I call upon Dr. Rogene Henderson, Lovelace Respiratory Research Institute. Dr. Henderson.

STATEMENT OF ROGENE F. HENDERSON, Ph.D., LOVELACE RESPIRATORY RESEARCH INSTITUTE

Dr. HENDERSON. Thank you for allowing me to speak to you today about a problem shared by defense agencies as well as other government agencies and industry. I am speaking of the problem of determining how complex mixtures of air pollutants contribute to health effects. Defense agencies are attempting to understand and deal with exposures of military personnel and civilians to mixtures of airborne hazardous materials encountered in training and military operations.

At the present time we do not know how to deal with mixtures of pollutants very well. Research and regulation have focused on single air contaminants or classes of contaminants. Little effort has been spent to understand the effects of pollutants as we actually breathe them, that is in complex mixtures.

Let me give examples of pollutant mixtures of concern to the military. All services are concerned about emissions from engines used to propel vehicles. The Army alone operates the Nation's largest fleet of diesel-powered on-road and off-road vehicles, including the Nation's largest truck fleet. The Navy, through its Naval Sea Systems Command, is concerned with diesel emissions from vessels, as is the Coast Guard. The Air Force and other services are concerned with emissions of traces of toxic materials from heaters, paints, and solvents, and even chemical warfare agents.

In 1998 Congress initiated a multi-agency government-industry program, the National Environmental Respiratory Center, specifically to attack this problem. The center is based at our institute, but also involves researchers at other laboratories. The effort is supported by Environmental Protection Agency (EPA), Department of Energy (DOE), Department of Transportation (DOT), one State, five trade associations, and 11 individual corporations.

We are developing new information comparing the composition of specific mixtures with their induced health effects through identically designed laboratory studies. These mixtures include diesel and gasoline engine emissions, wood smoke, cooking fumes, tobacco

smoke, road dust, and coal combustion emissions. Over 400 components of the mixtures and 200 health effects are being measured.

This database will allow statistical analyses that will point towards the components and their combinations that are associated with different health effects. Beyond this program, our institute offers additional resources that have been used by the DOD during recent years to study issues such as detecting airborne chemical-biological hazards, the composition of emissions from heaters in field tents, the long-term effects of retained depleted uranium fragments, and the long-term effects of inhaling small amounts of the nerve gas sarin.

We are discussing several additional projects with the military. For example, we observed that a month after an exposure to a level of sarin that caused no measurable immediate effects in rats, neuroreceptors in the hippocampus of the brain were altered. This is the region of the brain associated with memory. We also observed a depression in the activity of cells in the immune system. These findings warrant follow-up to determine the long-term implications and the level of exposure to cause these effects.

We are also focusing on acute respiratory distress syndrome (ARDS), a rapidly developed accumulation of fluid in the lungs that accompanies shock and injury. ARDS is responsible for many deaths of wounded personnel, who survive to leave the battlefield but later die.

Mr. Chairman, we seek the encouragement of this committee for the Department of Defense through the Army to establish a cooperative agreement with the Lovelace Respiratory Research Institute to participate in the National Environmental Respiratory Center and other military-related research at Lovelace in an ongoing, iterative working relationship with the agency.

Thank you.

[The statement follows:]

PREPARED STATEMENT OF ROGENE F. HENDERSON, PH.D.

Thank you for allowing me to draw your attention to a problem shared by several Defense agencies. I'm speaking of the so-called "mixture" problem, a simple name for the difficulty of determining how individual air contaminants contribute to the health effects of exposure to complex mixtures of air contaminants. Defense agencies are attempting to understand and deal with exposures of military personnel and civilians to traces of airborne hazardous materials encountered together with other exposures in training and military operations. This is something that we can't do well at the present time.

Let me give an example. All services are concerned about emissions from propulsion systems for vehicles. The Army alone operates the nation's largest fleet of diesel-powered on-road and off-road vehicles, including the nation's largest truck fleet. This is why its Tank-Automotive and Armaments Command (TACOM) is a major partner with other agencies and industry in the 21st Century Truck Program, in part to identify and reduce the most hazardous components of diesel emissions. The Navy, through its Naval Sea Systems Command, is concerned with diesel emissions from vessels, as is the Coast Guard. The Air Force and the other services are concerned with aircraft emissions. All services have concerns for exposure to traces of other airborne toxic materials ranging from heater emissions, to paints and solvents, to chemical warfare agents.

These issues have a common root problem: our poor understanding of the health hazards presented by individual components of complex mixtures of air contaminants. This issue also plagues other federal agencies, state and local governments, and industry. Research has focused on single air contaminants, classes of contaminants, or source emissions one at a time. Little effort has been spent to understand the effects of traces of pollutants as they are actually breathed in complex mixtures.

We have poor ability to determine which contaminants or combinations of contaminants cause which health effects and what levels are hazardous. This problem is not new, but it has been sidestepped because of its daunting complexity. We can't possibly study every combination of air contaminants!

A multi-agency, government-industry program, the National Environmental Respiratory Center, was initiated by Congress specifically to attack this problem. Based at our Institute but also involving researchers at other laboratories, this effort is supported by EPA, DOE, DOT, one state, five trade associations, and 11 individual corporations.

We are developing new information on mixture composition vs. health by identically designed laboratory studies of several complex mixtures, including diesel and gasoline engine emissions, wood smoke, cooking fumes, tobacco smoke, road dust, and coal combustion emissions. Over 400 composition variables and 200 health variables are being measured. This database will support the kind of statistical analyses that will point toward the components and their combinations that are associated with different health effects in a way that is impossible using data from past laboratory and epidemiological studies. This strategy will require approximately $6 million/year for 6 years to complete—a large sum, but not so large if spread across the stakeholders.

Beyond this program, our Institute offers resources that have been accessed by DOD during recent years to study issues such as detecting airborne chemical/biological hazards, the composition of emissions from heaters in field tents, the long-term effects of retained depleted uranium fragments, and the long-term effects of inhaling small traces of the nerve agent Sarin. We are discussing additional projects. For example, we observed that a month after an exposure to Sarin that caused no measurable immediate effects, neural receptors in the brain hippocampus were altered. This is the brain region associated with memory. We also observed a depression of cells in the immune system. These findings warrant follow-up to determine long-term implications and the level of exposure required to cause the effects. We are also focusing on the "acute respiratory distress syndrome", a rapidly-developing accumulation of fluid in the lung that often accompanies shock and injury, and is responsible for many deaths of battlefield wounded that survive to leave the battlefield, but die later.

Mr. Chairman, we seek the encouragement of this Committee for the Department of Defense, through the Army to establish a cooperative agreement with the Lovelace Respiratory Research Institute to participate in the National Environmental Respiratory Center, and other research, in an ongoing, iterative working relationship with the Agency.

Thank you.

Senator INOUYE. Thank you very much, doctor. Where is Lovelace located?

Dr. HENDERSON. It is in Albuquerque, New Mexico, on Kirtland Air Force Base.

Senator INOUYE. Thank you very much.

Now may I call upon Martin B. Foil, National Brain Injury Research Treatment and Training Foundation. Mr. Foil.

STATEMENT OF MARTIN B. FOIL, JR., NATIONAL BRAIN INJURY RESEARCH, TREATMENT AND TRAINING FOUNDATION

Mr. FOIL. Good morning, Senator Inouye. It is nice to see you again, sir. I appreciate your allowing me to be here.

My name is Martin Foil. I am the father of a man with a severe brain injury. I sit on the boards of the National Brain Injury Research, Treatment and Training Foundation and on the John Jane Brain Injury Center. I am the immediate Past Chairman of the International Brain Injury Association (BIA) and for many years served as Chairman of the BIA here in the United States.

On behalf of my son and the thousands of military personnel that receive brain injury treatment and services annually, I respectfully request that $5 million be added to the DOD's health affairs budget for the operation and maintenance for the defense and veterans

head injury program. This would be in addition to the $7 million already in the budget, thus a total of $12 million.

Good morning, Mr. Chairman.

Senator STEVENS [presiding]. Good morning, sir.

Mr. FOIL. A total of $12 million for the fiscal year 2002.

Brain injury is a major national problem that disproportionately affects the Nation's young service men and women. It is the leading cause of death and disability in young Americans. Approximately one and a half to two million injuries occur each year. Ninety thousand injuries lead to long-term and severe disability. Males from the ages of 14 to 24 have the highest incidence.

Under the leadership of Defense Secretary Cheney, the Defense and Veterans Head Injury Program (DVHIP) was established when it became apparent after the Gulf War that there was no overall systematic program for providing brain injury-specific care and rehabilitation within the DOD and the Department of Veterans Affairs (DVA), and as a result our service men and women now receive brain injury care and rehabilitation second to none in the world.

The DVHIP is a significant contribution to the health of the United States military and veteran populations. It is a component of the defense military health system, providing direct care at military treatment facilities and veterans hospitals throughout the Nation.

While there is a research component to the program, the primary purpose is to provide state of the art medical care to personnel sustaining concussions and more severe brain injury while on active duty. The purpose is to get them back to work or to appropriate rehabilitation as soon as possible.

This program strengthens our Nation's military readiness by helping service members get appropriate care and return to duty. Combat readiness requires spilt-second decisions to be made as to whether a soldier is capable of returning to his post. Assessing the extent of the injury and functional capacity of the injured military personnel is critical, especially in the use of sophisticated weapons systems. Just as important, if not more important, our treatments help determine which injured personnel are not capable of returning to their post.

I am pleased to report that through the DVHIP the DOD realizes significant savings in medical and retirement costs. The cost of a brain injury in a young adult may cost $4 million over a lifetime. I have expended more than that on my son. DOD saves millions if only three service men are treated by this program.

I respectfully request your support for the $5 million in the DOD appropriations bill under health affairs for operation and maintenance, for a total of $12 million for fiscal year 2002. We are always grateful for your support for the project over the years and hope you will again support our efforts to provide the best care possible for our Nation's men and women in uniform. I will answer any questions.

[The statement follows:]

PREPARED STATEMENT OF MARTIN B. FOIL, JR.

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 serve on the Board of Directors of the National Brain Injury Research, Treatment and Training Foundation (NBIRTT)[1] and the John Jane Brain Injury Center (JJBIC).[2] I am the immediate past Chairman of the International Brain Injury Association[3] (IBIA) and also previously served as Chairman of the national Brain Injury Association (BIA).[4] Professionally, I am the Chief Executive Officer and Chairman of Tuscarora Yarns in Mt. Pleasant, North Carolina.[5]

On behalf of the thousands of military personnel that receive brain injury treatment and services annually, I respectfully request that $5 million be added to the Department of Defense (DOD) Health Affairs budget for Operation and Maintenance for the Defense Brain and Spinal Cord Injury Program (DBSCIP). This would be in addition to the $7 million provided in the Department of Defense's budget, thus DBSCIP funding would total $12 million for fiscal year 2002.

I appreciate the opportunity to provide testimony regarding this important program which is a collaborative effort among DOD, Veterans Affairs (DVA), the Henry M. Jackson Foundation and NBIRTT. Last year, the Uniformed Services University of the Health Sciences (USUHS) changed the name of the Defense and Veterans Head Injury Program (DVHIP) to DBSCIP to reflect the collaborative research on spinal cord injury being done at the University. In addition, this year the National Brain Injury Research Treatment and Training Foundation (NBIRTT) has joined the effort to assist in coordinating the non-governmental aspects of the program through the use of its Scientific Advisory Board and to share some of its privately funded research findings with the DBSCIP. This testimony only reflects the work on brain injury through the DVHIP and its civilian partners, yet requests full funding for the entire DBSCIP.

The Defense and Veterans Head Injury Program (DVHIP)

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. The program was created after the Gulf War in 1991, when it became apparent that there was no overall systemic program for providing brain injury specific care and rehabilitation within DOD or DVA. With the leadership of Defense Secretary Richard Cheney and the Congress, the DVHIP was established, and as a result, our service men and women now receive brain injury care and rehabilitation second to none in the world.

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 is a prime example of a dual use project that contributes significantly to U.S. military readiness. The program not only treats active duty military personnel who sustain brain injuries each year and helps them return to duty, but the DVHIP serves as an important resource to veterans and the civilian population as well. Nationwide, there are some 1.5 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.

DVHIP and Military Readiness

An important goal of the DVHIP is to address basic questions relating to active duty military personnel sustaining brain injuries, including acute care and the combat casualty process, but the greatest impact on readiness is the assessment of mild brain injury on combat performance. The DVHIP has developed basic combat cas-

[1] NBIRTT is a non-profit national foundation dedicated to the support of clinical research, treatment and training. It coordinates the non-governmental programs of the Defense and Veterans Head Injury Program.

[2] JJBIC in Charlottesville, Virginia, provides brain injury rehabilitation to military retirees, veterans and civilians through an innovative and cost effective day treatment program.

[3] IBIA is a non-profit organization that represents medical and clinical professionals as well as persons with brain injury and family members dedicated to improving treatment and rehabilitation for persons with brain injury throughout the world.

[4] BIA is a national, non-profit organization dedicated to serving persons with brain injury, their families and caregivers in all 50 states and the territories.

[5] I receive no compensation from this program. Rather, I have raised and contributed millions of dollars to support the non-governmental components of this program.

ualty care protocols (including penetrating head injury) that can ensure treatments for brain injury are available in the field.

The DVHIP is a program of integrated care combined with translational research—the purpose is to use DVHIP research findings on the battlefield. Combat readiness requires split second decisions to be made as to whether a soldier is capable of returning to his post. Assessing the extent of brain injury and functional capacity of injured military personnel is critical, especially with the use of sophisticated weapon systems.

The DVHIP maintains an extensive historical military TBI archive, including WWI, WWII (Okinawa Campaign), Korean War, Vietnam War and Gulf War TBI medical records. The Vietnam War data include paper and computerized records of Phases I and II of the Vietnam Head Injury Study (VHIS) that have led to numerous publications. The DVHIP also includes a simple, updated Head and Spinal Combat Injury Registry form similar to that used by the Vietnam Head Injury Study. The registry has been approved by the Joint Committee of Military Neurosurgeons of the American Association of Neurological Surgeons and Congress of Neurological Surgeons and is ready for deployment in time of war. Early identification of injured soldiers will not only assist in immediate readiness efforts, but will facilitate long term management as well as the study of TBI resulting from battlefield operations.

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,[6] 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. Highlights of the program include:

—DVHIP maintains brain injury patient registries at each of the primary and secondary centers. The registry now includes some 9,000 patients, over 1,600 of whom have been added in 2000. The DVHIP registry includes mostly participants from DVHIP centers, but is working to expand to the entire military and veterans medical systems.

—A TBI treatment and referral algorithm was designed to assist primary caregivers in the management and referral of their patients with TBI. This now has been implemented at DVHIP sites and disseminated throughout the DVA medical system.

—A broad education and referral network has been created which includes providers from all branches of the military.

DVHIP's "Learn as We Treat" Site Projects

The combat training and sports TBI program identifies the impact of mild TBI on military performance and develops 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.

The site at Camp Pendleton incorporates a surveillance system for concussive injury into an operational setting, provides continuous education to primary medical providers, and has collected pilot data using a screening battery on patients with Grade 3 concussive injuries.

The DVHIP program at Walter Reed Army Medical Center, using telemedicine, conducted a briefing on TBI for all Army psychology services worldwide.

A third randomized trial is ongoing at Wilford Hall Air Force Medical Center focusing on military personnel with acute mild TBI. The study 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.

The DVHIP site at the Naval Medical Center, San Diego provides outpatient evaluations and case management services to TBI survivors across the entire range of severity of injury.

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[6] 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.

The lead veterans' centers are conducting a randomized controlled study comparing in-hospital cognitive therapy to in-hospital functional rehabilitation for individuals with more severe TBI. The primary outcome measures are return to work and level of independence at one year post injury.

DVHIP has developed three neuroprotective trials for service men and women with both severe and mild TBI. Focusing on combat training injury in Marines at Camp Pendleton, these studies utilize safe and inexpensive compounds—pyruvate and niacinamide—to protect energy metabolism in the injured brain.

A TRICARE demonstration project providing specialized treatment reimbursement and rehabilitation of military beneficiaries at four lead veterans sites is being continued.

In June, 2000, the results of the WRAMC Randomized Controlled Trial of Cognitive Rehabilitation were published in the Journal of the American Medical Association. Participants in this study had a 90 percent return-to-work rate and 67 percent returned to active duty.

NBIRTT and Translational Research

The National Brain Injury Research Treatment and Training Foundation is a great addition to the program. As a national foundation dedicated to the support of clinical research, treatment and training, it makes available the results of private sector research grants to support DVHIP objectives. NBIRTT works closely with the Henry M. Jackson Foundation and USUHS to coordinate the non-governmental programs of the DVHIP (the work of JJBIC, IBIA and BIA). NBIRTT's Scientific Advisory Board reviews the non-governmental partners' activities to assure that all efforts are or can be militarily related and consistent with the principles and goals of the DVHIP.

Many of the Foundation's Board Members have been personally affected by brain injury, including Jim and Sarah Brady and Felicia and Byron Rubin of Texas. The Rubin Family has contributed millions of dollars toward research on brain injury and will continue to do so. These resources enhance the work of the DVHIP and help assure that federal funds are used primarily for treatment of military personnel and veterans.

IBIA/JJBIC 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 and the John Jane Brain Injury Center in Charlottesville, Virginia assists in the three major components of the DVHIP: clinical treatment, clinical research and clinical training:

—IBIA/JJBIC/DVHIP supports research and treatment to address neurobehavioral problems that affect return to work and fitness for duty.

—The IBIA is sponsoring the development of evidence based practice guidelines for the treatment of mild traumatic brain injury, neuroimaging in brain 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 21st 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/JJBIC/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/JJBIC/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.

BIA Services—Information and Resources

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 members seeking assistance for brain injury treatment, placement, rehabilitation, and general information. In particular, BIA does the following:

—BIA maintains a nationwide 1–800 help line, staffed by trained specialists. 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'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.[7]

Conclusion

The DVHIP is a significant contribution to the health of the United States military and veteran populations. Using the principle "learn as we treat," the program has three major components: clinical treatment, research and training. The goal is to maximize the potential of military personnel, assist able soldiers to return to duty, and conduct translational research that will revolutionize care on the battlefield.

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 DOD significant medical and retirement costs.

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 NBIRTT 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 $5 million for fiscal year 2002 in DOD Health Affairs for Operation and Maintenance to continue this important program (at a total funding level of $12 million).

Senator STEVENS. Thank you very much.

Senator Inouye, I appreciate your courtesy.

Mr. FOIL. Thank you so much for allowing us to be here.

Senator STEVENS. Dr. Ko, National Security Research.

STATEMENT OF HARVEY KO, Ph.D., COALITION FOR NATIONAL SECURITY RESEARCH

Dr. KO. Good morning, Mr. Chairman and members of the subcommittee. My name is Harvey Ko. I have over 28 years of experience in classified DOD programs. I am presently the Chief Scientist for Counterproliferation at the Johns Hopkins University Applied Physics Laboratory.

I am here to testify today on behalf of the Coalition for National Security Research (CNSR), a broadly based group of scientific, engineering, mathematical, and behavioral societies, universities, and industrial associations committed to a stronger defense science and

[7] 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.

technology base. The CNSR strongly supports DOD's science and technology (S&T) programs across all defense organizations, especially those defense research programs providing support to our Nation's universities. These programs are the foundation of the Department's research, development, test and evaluation activity.

I want to express deep appreciation for the committee's past support for the fiscal year 2001 funding approved for these programs. We urge the subcommittee to approve robust and stable funding for these basic, applied, and advanced technology development elements in fiscal year 2002. Specifically, CNSR joins many other organizations in urging the subcommittee to increase the S&T program to $10 billion in fiscal year 2002, a funding target consistent with numerous program and Department review, including recommendations made by the Defense Science Board.

With consideration of the fiscal year 2002 budget, it is important to recognize the critical role that Department of Defense science and technology plays in ensuring the future national security of the United States and the safety and effectiveness of our soldiers, sailors, airmen, and marines. Simultaneously, these defense science programs contribute to the research enterprise of the country, especially the education of tomorrow's scientists and engineers.

I would like to now take a few moments to give you an example of the return on investment of these DOD programs. In response to the need to deter and counter the use of biological and chemical weapons of mass destruction, the Applied Physics Laboratory of the Johns Hopkins University is working under Defense Advanced Research Projects Agency (DARPA) sponsorship to develop and test new technologies that will protect both military and civilian populations.

Advanced time of flight mass spectrometer instruments are being developed and tested to be able to detect a broad range of biological pathogens and chemical warfare agents. Background environmental characterization and biosurveillance networks are being tested to measure behavior in a population that could signal the possible use, terrorist use of biological and chemical warfare agents. The background characterization helps us to understand the nature of the background fluctuations, to differentiate naturally occurring phenomena such as seasonal flu from anomalous events like the West Nile Virus and man-made biological threats introduced by terrorists.

Such systems will inform government when such events occur, help decide the proper course of action, and reassure the rest of the unaffected population.

New biosurveillance networks are using information-based architectures, sampling data from local medical, pharmaceutical, and veterinary sources. Sophisticated signal processing techniques, such as those we have used in anti-submarine warfare, are being used to collate this information in a positive fashion.

Collectively, these developments will give us the capability to deal with today's threat spectrum and future emerging threats.

In closing, I want to thank again the subcommittee for its continued support of defense science and technology and for the opportunity to appear here today on behalf of the Coalition of National

Security Research. We look forward to assisting you in any way possible. Thank you.

[The statement follows:]

Senator STEVENS. Thank you very much, Dr. Ko.

PREPARED STATEMENT OF DR. HARVEY KO

Good morning Mr. Chairman and Members of the Subcommittee, my name is Dr. Harvey Ko. I have 28 years of experience with DOD research programs and am currently Chief Scientist for Counterproliferation at the Johns Hopkins University Applied Physics Laboratory. I am here to testify today on behalf of the Coalition for National Security Research, a broadly based group of scientific, engineering, mathematical and behavioral societies, universities and industrial associations committed to a stronger defense science and technology base.

CNSR strongly supports DOD's S&T programs across all defense organizations, especially those defense research programs providing support to our nation's universities. These programs are the foundation of the Department's Research, Development, Test and Evaluation (RDT&E) activity. I want to express deep appreciation for the Committee's past support and for the fiscal year 2001 funding approved for these programs. We urge the subcommittee to approve robust and stable funding for these basic (6.1), applied (6.2) and advanced technology development (6.3) elements in fiscal year 2002. Specifically, CNSR joins many other organizations in urging the subcommittee to increase the S&T program to $10 billion in fiscal year 2002, a funding target consistent with numerous program and department reviews including recommendations made by the Defense Science Board.

Despite substantial appreciation for the importance of DOD S&T programs on Capitol Hill, total research within DOD declined by over 24 percent in constant dollars during the last decade. This decline poses a real threat to America's ability to maintain its competitive edge in the long term, as warfare becomes increasingly technology- and information-based. As you know, the President proposes to increase defense R&D programs by $20 billion over five years, including $2.6 billion in fiscal year 2002. Although the administration did not specify which R&D accounts would receive increases, we strongly recommend that enough of this proposed increase be directed to the core S&T research accounts to achieve the $10 billion funding target, an increase which will continue the positive trend started in fiscal year 2001 and allow for both preparation and protection of the men and women in our future military.

Partnerships

Basic research is of critical strategic value to all of DOD and important to maintaining the relationship between DOD, other federal agencies, and the university research community. The Department's investment in S&T, which comprises about 25 percent of the overall RDT&E line, is executed through a partnership among the Defense Agencies, service laboratories, universities, industry and international collaborations. Each member of the partnership provides its own unique capabilities and strengths. Universities perform roughly 60 percent of all basic S&T for the Department of Defense. These partnerships have resulted in enormous benefit to all parties involved by significantly advancing the frontiers of knowledge in service of our military.

The Need for DOD S&T

With consideration of the fiscal year 2002 budget, it is important to recognize the critical role DOD S&T plays in ensuring the future national security of the United States and the safety and effectiveness of our soldiers, sailors, airmen, and marines. Simultaneously, these defense science programs contribute to the research enterprise of the country and the education of tomorrow's scientists and engineers. The Department provides a critical investment in several disciplines including engineering, physical, math, computer and behavioral sciences vital to our future national security.

The challenges of a new era—in homeland defense, asymmetric threats, infrastructure protection, and disruptive technologies, among others—place an even more important emphasis on enhanced battlefield awareness and increased warfighter protection. From an R&D standpoint, DOD must maintain focus on both the near-future readiness and modernization needs of the department and on the long-term future needs of the warfighter, ten and twenty years from now. Throughout this century, our most significant military achievements have derived from the transforming discoveries of science and the development of new technological capabilities enabled by science. Future military capabilities will rest on our commitment to mak-

ing significant investments in science and technology, which has provided the technical basis for the strong economic growth of the United States over the past 30 years. DOD research programs provide new knowledge and understanding in science and engineering fields that underpin national defense. This research creates new opportunities to enhance capabilities of future military systems and to make them easier and less expensive to manufacture, operate and maintain.

As you are aware, previous investments in defense science and technology have led to breakthrough developments in areas such as distributed networking, advanced materials, global navigation, precision guidance, and stealth technology that have equipped America's men and women in uniform with the finest technologies in the world. Current research in remotely-operated mini-robots, remote medicine, chemical and mechanical sensors, large scale battlefield simulations and advanced data memory systems will protect the warfighters of the future by removing them from harm's way, providing on-site emergency medical care, identifying dangerous environments, improving training and speeding data availability and usability.

The support of this subcommittee is critical to ensuring that we maintain a viable S&T base to meet our future security needs on land, in the air, and at sea.

DOD S&T Results for National Security and Domestic Applications

Now I would like to take a moment to highlight a few examples of the return on investments in basic R&D provided to DOD and the nation. I know you will all recognize some of these successes, but some might be less well known. I will start with some examples from my own institution.

In response to the need to deter and counter the use of biological and chemical weapons of mass destruction, the Applied Physics Laboratory of the Johns Hopkins University is working under DARPA sponsorship to develop and test new technologies that will protect both military and civilian populations. Advanced Time-of-Flight Mass Spectrometer instruments are being tested to rapidly detect a broad range of biological pathogens and chemical warfare agents. Background Environmental Characterization and Biosurviellance networks are being tested to measure anomalous behavior that could signal the terrorist use of biological and chemical warfare agents. These developments will give us the capability to deal with today's threat spectrum and future emerging threats.

The University of South Carolina, through its DEPSCoR-supported Industrial Mathematics Institute (IMI), has developed algorithms and software that enable the rapid display, querying and registration of Digital Terrain Maps. This software is of potential value in mission planning, autonomous and semi-autonomous navigation, rapid targeting and post battlefield assessment.

A DOD-funded researcher at the University of California at Berkeley, using a pair of Plexiglas wings he called "Robofly," for the first time provided a comprehensive explanation of how insect fly. The research could lead to the development of tiny flying devices that could be dispatched in swarms to spy on enemy forces.

Improved energy efficiency throughout the Defense Department and its mission activities—testing, training, operations, facilities—has the potential to save the federal government, and in turn the taxpayer, millions per year. Fuel cells are among the most promising sources of clean energy needed for numerous civil and military devices. The development of efficient electrocatalysts is essential to the improvement of fuel cell performances. Researchers at the University of South Carolina, supported by DOD S&T funding, are applying theoretical and computation methods to the understanding of electrocatalysis, focusing on the electron reduction of oxygen on platinum electrodes.

No one foresaw the enormous range of applications and whole industries that have evolved from the Defense-sponsored discovery of lasers. The basic concepts leading to the development of the laser were discovered in a microwave research program at Columbia University funded by the three Services. Lasers were combined with transistors and the billion-dollar fiber optic industry resulted. Fiber optic communications, compact disk players, laser printers, procedures to reattach eye retinas and new cancer surgeries all exist because of these breakthroughs, the result of defense basic research.

In response to threats due to inadequate or outdated mission terrain mapping tools, the Georgia Institute of Technology developed Falcon View, a laptop-mapping software. Designed for the U.S. Air Force, U.S. Special Operations Command and the U.S. Navy, Falcon View integrates aeronautical charts, satellite images and other data to provide detailed, up-to-date data imagery to flight crews conducting mission planning using a relatively simple laptop computers. The system is credited with reducing typical mission planning time from seven hours or more down to twenty minutes.

DARPA and ONR-sponsored researchers at Duke University Medical Center and the Massachusetts Institute of Technology have tested a neural system in animals that utilizes implanted electrodes to assist brain signals in controlling robotics. Scientists transmitted the brain signals over the Internet, remotely controlling a robot arm 600 miles away. The recording and analysis system could form the basis for a brain-machine interface that would allow paralyzed patients to control the movement of prosthetic limbs. The finding also supports new thinking about how the brain encodes information, by spreading it across large populations of neurons and by rapidly adapting to new circumstances.

The Applied Physics Laboratory of the University of Washington, Seattle, has developed under U.S. Navy sponsorship, a high resolution, imaging sonar for underwater mine detection and identification in poor visibility waters such as those commonly encountered in ports and harbors. The unique sonar, based on acoustic technology that mimics the optical lens and retina of the human eye, produces a picture-like image. One version of the sonar is designed to be the "eyes" of the unmanned, autonomous, underwater vehicles being developed for mine clearance and special operations. A hand-held version enables a diver to easily and accurately distinguish between mines and false targets such as mine-like debris, and to identify specific mine types in zero-visibility water. It is intended to assist Special Forces and Explosive Ordnance Disposal teams and is presently being used in Bahrain.

In the late 1960's, DOD-initiated research to explore linking computers in different geographical locations to improve communication between their users. The research produced the world's first packet-switched network, the ARPANET, which connected major universities. As a result, more and more people gained access to more powerful computers. Innovation in network design and improved research spawned a new breed of information scientists who expanded the network to every corner of the country and the world. Electronic mail, which was considered earlier to be of minor interest to users, has become the most used service of computer networks. Through ARPANET, defense basic research made it possible to launch the National Information Infrastructure.

Conclusion

In closing, I want to again thank the subcommittee for its continued support of Defense S&T and for the opportunity to appear here today on behalf of CNSR and its members. The Coalition for National Security Research looks forward to assisting you in any way possible.

Senator STEVENS. Next, Harold Grimes, National Commander of the Uniformed Services Disabled Retirees. Good morning, sir.

STATEMENT OF HAROLD G. GRIMES, SR., NATIONAL COMMANDER, UNIFORMED SERVICES DISABLED RETIREES

Mr. GRIMES. Good morning, Mr. Chairman, Mr. Inouye, members of the Appropriation Committee. I am pleased to have this opportunity to appear before you to convey issues and concerns of American disabled military retirees, men and women who have given most of their adult life in the service of their country and the people of this great Nation.

Before I discuss the issues of concern facing the disabled military retirees, let me convey the thanks of all Uniformed Services, Disabled Retirees (USDR) members and 400,000 plus disabled military retirees and 28 million veterans of this country. Your continued support of this committee for uniformed services disabled retirees has one major purpose and that is to allow disabled retirees to live out their lives in dignity and honor which they truly earned.

Our organization and Representative Michael Bilirakis of Florida have tried for more than 20 years to pass the issue of concurrent receipt. The Congress for this period of time has contended that because of large national deficits it was impossible to allow the passage of H.R. 303, concurrent receipt. Now, with the support and help of Senator Harry Reid of Nevada, there is tremendous strength and support in the Senate and House, with Bills H.R. 303

and Senate Bill 170. We now feel that, with the large surpluses and the support which USDR and all the national veterans organizations have gained in both Houses, that we must ask that the Appropriations Committee do whatever is necessary to allocate the moneys for the passage of these important bills.

The passage of concurrent receipt will be an asset in many ways. The earned retirement dollars that would be paid to disabled veterans will be taxed in most cases and 25 percent of those revenues will be returned to the U.S. Treasury in tax dollars of one-half a billion dollars or more. The cost of military recruiting can be affected at a savings of millions of dollars now being spent needlessly because of the lack of support of the military retiree community. The loss of our support and help because of this issue and the loss of other benefits has helped cause the lack of recruits for today's military and a cost that is unwarranted.

Mr. Chairman, the disabled military retiree is the only government employee or agency that is asked to undergo such discrimination. Because of this injustice, it has placed undue hardships upon the men and women who have given more to their country than anyone else, only to be put on the back shelf and forgotten because of an archaic law that should have been rescinded years ago.

We ask for our retirement that has been earned as an entitlement for 20 years or more of arduous service to the United States of America. Additionally, we ask for the VA service-connected disability award, which is a completely different issue and benefit than retirement pay. It is awarded as compensation for injuries and illness contracted during those years of service to his or her country.

The Congress of 1984 saw fit to pass a bill to establish a military retirement trust fund administered by the Department of Defense and—correction, administered by Department of Treasury, for all who served honorably for 20 or more years. There has also been established a VA compensation program to pay disability for pain and suffering to those who were disabled in service to this great Nation.

VA compensation is still granted and being paid, but only the military retiree is told to pay his own disability for his earned retirement entitlement. We currently have a majority of support from both houses of the Congress, but still have been unable to get a bill to the floor for a favorable vote.

I ask, Mr. Chairman, that your committee take whatever actions are necessary to make funds available to fund this entitlement and also the VA benefit. This issue has lingered on far too long and has been put off by delaying actions and tactics such as Mr. Matt Thornberry's action taken this year in the House to have the House once again send it to the Secretary.

Senator STEVENS. Mr. Grimes, I am sorry to tell you your time has expired. Besides that, this is an entitlement. This committee has nothing to do with that other than to vote on the floor. That is not within the jurisdiction of our committee to fund. I am sorry, I think you know that. I appreciate your appearance. Thank you very much.

Mr. GRIMES. Thank you, sir.

[The statement follows:]

PREPARED STATEMENT OF HAROLD G. GRIMES, SR.

Messrs, Chairman and members of the Appropriations Committee: I am pleased to have this opportunity to appear before you to convey issues and concerns of Americas' Disabled Military Retirees, men and women who have given the best years of their adult life in the service to their country and the people of this great nation.

Before I discuss the issues of concern facing the Disabled Military Retiree, let me convey the thanks of all USDR members and the 400,000 plus Disabled Military Retirees for the continued support of you and your committee.

The Uniformed Services Disabled Retirees has one major purpose, and that is to allow all Disabled Retirees to live out their lives in dignity and honor, which they truly earned. Our organization and Representative Michael Bilirakis of Florida have tried for more than twenty years to pass the issue of con-current receipt. The Congress for this period of time has contended that because of large National deficits it was impossible to allow the passage of H.R. 303, Con-Current Receipt. Now with the support and help of Senator Harry Reid of Nevada there is tremendous strength and support in the Senate and House with bills H.R. 303 and S. 170. We now feel that with the large surplus and the support which USDR and all of the National Veterans Organizations have gained in both houses, that we must ask that the Appropriations Committee do what ever is necessary to allocate the monies for the passage of these most important bills. The passage of con-current receipt will be an asset in many ways. i.e. the earned retirement dollars that will be paid out to disabled veterans will be taxed in most cases at 25 percent level and add revenues of one-half billion dollars or more to the U.S. Treasury—the cost of military recruiting can be affected at a savings of millions of dollars now being spent needlessly because of the lack of support from the military retirement community. The loss of our support and help because of this issue and the loss of other benefits has helped caused the lack of recruits for todays military and a cost that is unwarranted.

Mr. Chairman, the Disabled Military Retiree is the only government employee or agency that is asked to under-go such discrimination. Because of this injustice it has placed undue hardships upon the men and women who have given more than anyone, to their country only to be put on the back shelf and forgotten because of an archaic law that should have been rescinded years ago. We ask for our Retirement that has been earned as an entitlement for 20 or more years of arduous service to the United States of America, additionally we ask for the VA Service Connected Disability Award, which is a completely different issue and benefit than Retirement Pay, is awarded as compensation for injuries and illnesses contracted during those years of service to his/her country.

The Congress of 1984 saw fit to pass a bill to establish a military retirement trust fund administered by the Department of the Treasury for all who served honorably for 20 years or more. There has also been established a VA compensation program to pay disability for pain and suffering to those who were disabled in the service of this great nation. VA compensation is still granted and being paid but only the military retiree is told to pay his own disability from his earned retirement entitlement.

We currently have a majority of support from both Houses of Congress but still have been unable to get a bill to the floor for a vote. I ask Mr. Chairman, that your committee take what-ever actions that are necessary to make funds available to fund this entitlement and also the VA Benefit. This issue has lingered on far to long and has been put off by to many delaying tactics. Mr. Chairman, as of this date over 331 members of the House have co-sponsored H.R. 303 and over 56 members of the Senate have co-sponsored S. 170. I fail to understand, with this kind of support for the Disabled Military Retiree, and the facts that have been presented over the past twenty years, why this injustice continues.

After a review of H. Con. Res. 83 of the 107th Congress, it is hard for me to understand why there is no money for persons who fought for this country. Billions of dollars are spent for social security for illegal aliens to this country, paying for their education, health benefits but we forget our own.

Senator STEVENS. Our next witness, Ms. Hershkowitz.

STATEMENT OF LOUISE E. HERSHKOWITZ, CRNA, AMERICAN ASSOCIATION OF NURSE ANESTHETISTS

Ms. HERSHKOWITZ. Chairman Stevens, Senator Inouye, good morning.

Senator STEVENS. Ms. Hershkowitz, pardon me.

Ms. HERSHKOWITZ. Thank you. Thank you for the opportunity to testify before the subcommittee today. My name is Louise Hershkowitz and I am a certified registered nurse anesthetist (CRNA). I am a CRNA and a member of the American Association of Nurse Anesthetists (AANA).

I am testifying today on behalf of AANA, which represents more than 28,000 CRNA's, including over 600 that serve in our armed forces. I hope to inform you today about the national nursing shortage that has been well publicized, how that affects the availability of nurse anesthetists, and how this committee may help DOD face this crisis.

Enrollments in nursing programs continue to decline and the nursing work force continues to age and retire. This is true for CRNA's as well. Recruitment and retention of CRNA's for the military becomes increasingly difficult when the civilian sector faces such critical shortages. According to a 1998 work force survey by AANA, as many as 59 percent of civilian institutions in this country are also actively recruiting CRNA's.

In addition, the escalating number of health care procedures requiring anesthesia have increased the need for CRNA's. However, the demand for services currently exceeds the availability of these anesthesia providers. This shortage continues to create a competitive hiring market in which it is difficult for the military to compete. 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.

In addition, the high demand and low supply of CRNA's in the health care community leads to higher incomes, widening the gap in pay for CRNA's in the civilian sector as compared with the military. There has been no change in the incentive specialty pay (ISP), since the increase from $6,000 to $15,000 was instituted in fiscal year 1995, even though civilian pay has continued to rise during this time.

We would like to thank the members of this committee for their continued support and funding of the ISP and for board certification pay for nurse anesthetists. At this time we request that the committee look at raising the ISP for both members under service obligation and those no longer under service obligation payback for their education in anesthesia. 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 the Department of Defense could benefit even more with more appropriate utilization of its anesthesia providers. For decades, CRNA's have staffed ships, isolated U.S. bases, forward deployed combat hospitals, and forward surgical teams without physician anesthesia support. Currently in Kosovo there is a single nurse anesthetist that is providing all the anesthesia care, again no anesthesiologist present. If such practice models are accepted for deployed situations, there is no reason they should not be acceptable in urban military treatment facilities.

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, AANA thanks this committee again for its support of military CRNA's through the ISP and 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 their consideration of these issues and will be happy to answer any questions you may have.

[The statement follows:]

PREPARED STATEMENT OF LOUISE E. HERSHKOWITZ

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 outcome 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 United States 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. No anesthesiologists are assigned to these missions.

NURSING SHORTAGE—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, 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.

In addition, the AANA cited a decline in anesthesiology resident positions, as well as an increase in office-based surgery and surgery in places other than hospitals as driving the increased need for CRNAs. Additionally, with managed care continuing to pursue cost-cutting measures, coverage plans are recognizing CRNAs for providing high-quality anesthesia care with reduced expense to patients and insurance companies. The cost-efficiency of CRNAs helps keep escalating medical costs down.

According to AANA's 1998 Workforce Survey, 35 percent of respondents cited an increase in the number of CRNA positions, compared with a 20 percent increase in

1997. Forty-three percent of the nurse anesthetist managers reported open positions for CRNAs within their departments, ranging from one to twelve available jobs. Fifty-nine percent of the respondents were actively recruiting CRNAs.

The escalating numbers of health care procedures requiring anesthesia have increased the need for CRNAs. However, the demand for services currently exceeds the availability of these anesthesia providers. In recent years, an increase in the number of CRNAs who are retiring, combined with decreasing graduation rates from nurse anesthesia programs, has contributed to the overall decline in CRNA numbers.

In 1990, the U.S. Department of Health and Human Services published findings indicating a national shortage of almost 5,400 nurse anesthetists. The study concluded that nurse anesthesia educational programs would need to produce between 1,500 and 1,800 graduates annually to meet societal nurse anesthesia demands by the year 2010. Nevertheless, only about 1,000 nurse anesthesia students graduate annually.

As recently as February 28, 2001, Brigadier General Barbara C. Brannon, Director of the Air Force Nursing Corps, testified before this Senate Committee that, "the national nursing shortage is having a devastating effect on staffing throughout the health care industry, and the Air Force Medical Service is no exception. For the third consecutive year, we are experiencing shortfalls in accessions. We were 85 nurses, or 30 percent, short of our nurse recruiting goal in fiscal year 1999." We couldn't agree more. This nursing shortage will continue to create a competitive environment for CRNAs to be recruited by the civilian sector or military service branches.

In addition, at a time of a national nursing shortage greater utilization of nurses at the military treatment facilities (MTFs) will be needed to meet the medical needs of aging retirees in the new TRICARE for Life program. The passage of the Fiscal Year 2001 Defense Authorization Act included TRICARE for Life, the expansion of medical care for all military retirees over the age of 65 at the MTF.

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

On February 28, 2001, Rear Admiral Kathleen Martin, Director of the Navy Nurse Corps, testified before this Senate Committee:

> Our recruiting success depends heavily on your continuation of the accession bonus and the education stipend programs. Given today's competitive health care environment, that may not be enough to maintain the force structure. Currently, only nurse practitioners, midwives and nurse anesthetists receive any type of specialty pay. That program has been a successful retention tool thus far, but the civilian-military pay gap is rapidly widening. Further retention bonuses may be needed to retain all types of nurses as competition increases for the dwindling supply.

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, "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 was 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.

High demand and low supply of CRNAs in the health care community leads to higher incomes widening the gap in pay for CRNAs in the civilian sector compared to the military. The fiscal year 2000 AANA Membership survey measured income in the civilian sector by practice setting. The median income in a hospital setting is $100,000, MDA group $90,000, and self-employed CRNA $108,000 (includes Owner/Partner of a CRNA Group, CRNA Physician Group, or Locum Tenens Agency and or Independent Contractor). These median salaries include call pay, overtime pay, and bonus pay.

In civilian practice, all additional skills, experience, duties and responsibilities, and hours of work are compensated for monetarily. Additionally, training (tuition and continuing education), health care, retirement, recruitment and retention bonuses, and other benefits often equal or exceed those offered in the military. For example the AANA fiscal year 2000 membership survey reported, CRNA's median annual vacation is 22 days, 6 days of holiday and 6 sick days.

Active duty CRNAs are subject to working 24 hours a day 7 days a week when deployed. In contrast, civilian contract CRNAs employed within MTFs work 35–40 hours a week and have higher pay. These contract CRNAs have higher salaries ranging from $93,000–$129,000. Depending on the contract, these CRNAs typically work weekdays with no on-call duties, or other administrative, supervisory, or teaching responsibilities. AANA members have mentioned that this can create a morale issue amongst CRNAs working at MTFs. In addition, there are cases when active duty CRNAs have separated from the military to then contract with a TRICARE subcontractor and make a higher salary at the same MTF.

Rear Admiral Kathleen Martin, Director of the Navy Nurse Corps, stated for the record before this Senate Committee at the February 28, 2001 hearing:

> Compensation is an issue for military staff as well. I clearly see this as an MTF commander. Military personnel work side by side with contract staffs who command salaries far exceeding those of their military counterpart. This creates additional dissatisfaction for our military members. Compensation is a powerful driver in the decision to remain on active duty or to leave the service.

Salaries in the civilian sector will continue to create incentives for CRNAs to separate from the military, especially at the lower grades without a competitive incentive from the military to retain CRNAs. 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 an-

esthesiologist 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. In March of 2000, Rear Admiral Kathleen Martin, Director of the Navy Nurse Corps, testified to this Senate Committee:

> 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.

Senator STEVENS. What is the enlistment period for a new nurse anesthesiologist?

Ms. HERSHKOWITZ. The commitment after nurse anesthesia education is 4 years.

Senator STEVENS. We would be very interested in some mechanism to help them pay off their student loan if they come in with student loans. Would you give us some estimate on that? I do think you are right, this is one of the critical areas of the services, according to the hearings we have had so far. We would like to have a conference with you and see what we can do to help you.

Ms. HERSHKOWITZ. We would be very happy to do that, Senator.

Senator INOUYE. I just want to point out that on my last surgery at Walter Reed the anesthesia was administered by a nurse anesthetist.

Ms. HERSHKOWITZ. Thank you, Senator Inouye, for your support over the years as well.

We would very much like to work with you on that, Senator.

Senator STEVENS. Thank you very much. Please contact us. We will be happy to work with you.

Ms. HERSHKOWITZ. Thank you. We will.

Senator STEVENS. Dr. Taylor.

STATEMENT OF ROBERT TAYLOR, M.D., Ph.D., CO-CHAIR, GOVERNMENT AFFAIRS AND ADVOCACY COMMITTEE, RESEARCH SOCIETY ON ALCOHOLISM

Dr. TAYLOR. Good morning, Mr. Chairman and members of the subcommittee. My name is Robert Taylor. I am a professor of pharmacology and medicine and chairman of the Howard University College of Medicine's Department of Pharmacology. I also co-chair the Government Affairs and Advocacy Committee for the Research Society on Alcoholism (RSA). RSA is a professional research society whose 1200 members conduct basic medical psychosocial research on alcoholism and alcohol abuse, primarily at academic institutions.

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 has recognized this problem by providing additional funding for medical research in the defense health program in recent years, and we are particularly pleased that alcohol research has been specifically mentioned as one area to be funded. We commend this committee, particularly the efforts of Senator Harkin, in the past.

Furthermore, we are pleased to report that 4 of the 14 proposals that were recommended for funding by the DOD for fiscal year 2000 were for alcohol abuse prevention research. You will recall that Congress appropriated $25 million in fiscal year 2000 to DOD to cover research in 14 specific areas, including alcoholism research. We believe that there is a clear need for more research in this area and would like to propose that additional funds be directed toward research that will address the problem of alcoholism and alcohol abuse in the military.

Although the peer-reviewed medical research program created by Congress in fiscal year 1999 is relatively new, the DOD reports recently that projects funded from that program and projects from early fiscal year 2000 have already produced significant research outcomes, ranging in areas from basic research to clinically applicable findings. For instance, in the area of alcohol abuse a research team at Tripler Army Medical Center showed that even short-term alcohol abuse, equivalent to three days of binge drinking, can alter the hydration status of the individual 18 hours after the last drink of alcohol.

As you know, alcoholism is a tragedy that touches all Americans and American families. One in ten Americans suffer from alcoholism or alcohol abuse and their drinking will impact on their family, their community, and society as a whole.

Recent research also indicates that alcoholism costs the Nation approximately $185 billion annually. One-tenth of this pays for treatment. The rest is lost productivity, accidents, violence, and premature death.

Now, with regards to the military, the effects of alcoholism and abuse are likely to be more enormous. For example, 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 alcohol, heavy alcohol use, is about 1.8 times higher for the military than for civilians. This is data from the 1998 Department of Defense survey of health-related behaviors among military personnel.

Among personnel in the lower pay grades, for example E–1 to E–3, about one in five individuals report lost productivity due to drinking and one in six report serious consequences of drinking. Because these negative effects are most prominent among the junior enlisted personnel, the absolute numbers of personnel experiencing drinking problems is quite large. Furthermore, the effects of alcohol abuse in the military place in jeopardy the health and safety of all who serve in the armed services.

Importantly, heavy alcohol use and associated negative effects have not declined significantly over the past decade. This is in contrast to declines in the use of illicit drug use among the military, and this highlights the critical need for more programmatic effort and resources directly targeting alcohol use in the military.

Research, however, holds the promise of developing a better understanding of the etiology of alcoholism, and we in the alcohol research community are actively trying to find ways to bring our research to bear on the military situation.

I thank you for your efforts, Mr. Chairman, and to the committee, and I appreciate your efforts in the past.

Senator STEVENS. Thank you very much, Dr. Taylor.

[The statement follows:]

PREPARED STATEMENT OF ROBERT TAYLOR

Good morning Mr. Chairman and Members of the Subcommittee. My name is Robert Taylor. In addition to being the Chairman of Howard University's Department of Pharmacology, I am the Co-Chair of the Government Affairs and Advocacy Committee for the Research Society on Alcoholism (RSA). RSA is a professional research society whose 1,200 members conduct basic, medical, 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 4 of the 14 proposals that were recommended for funding by the Department of Defense (DOD) for the fiscal year 2000 were for alcohol abuse prevention research.

You will recall that Congress appropriated $25 million in fiscal year 2000 to DOD to cover research in 14 areas, including alcoholism research. We believe that there is 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.

Although the Peer Reviewed Medical Research Program created by Congress in fiscal year 1999 is still relatively new, the DOD reports that projects funded in fiscal year 1999 and early fiscal year 2000 have already produced significant research outcomes, ranging in areas from basic research to clinically applicable findings. For instance, in the topic area of alcohol abuse, a research team at Tripler Army Medical

Center showed that even short-term alcohol abuse, equivalent to 3 days of binge drinking, can alter the hydration status of the individual 18 hours after the last drink of alcohol.

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 $185 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 effects 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.

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). Because these negative effects are most prominent among the junior enlisted personnel, the absolute numbers of personnel experiencing drinking problems are quite large. Furthermore, the effects of alcohol abuse in the military place in jeopardy the health and safety of all who serve in the armed services.

Importantly, heavy alcohol use and associated negative effects have not declined significantly over the past decade. These findings stand in striking contrast to dramatic declines in rates of illicit drug use among military. This highlights the critical need for more programmatic effort and resources directly targeting alcohol use in the military.

Research, however, 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. In addition, 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.

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, such as acamprosate, 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.

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. RSA also urges the Subcommittee to include alcohol abuse and alcoholism in the list of priority research areas recommended for the Department of Defense Peer Reviewed Medical Research Program.

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 significant problem of alcoholism and alcohol abuse among the men and women serving in our armed forces.

Thank you for your consideration of our request.

Senator STEVENS. Our next is Dr. Donald Burke.

STATEMENT OF DONALD BURKE, M.D., CHAIRMAN, LEGISLATIVE TASK FORCE, AMERICAN SOCIETY OF TROPICAL MEDICINE AND HYGIENE

Dr. BURKE. Chairman Stevens and Senator Inouye, thanks for the opportunity to speak to you. I am here representing the American Society of Tropical Medicine and Hygiene. I am a professor of international health at Johns Hopkins University and a retired Army colonel, where I was at the Walter Reed Army Institute of Research for many years and had some extremely valuable interactions with you over the past, and thank you for your help in the past.

I am here today to call attention to two particular issues. One is the military Human Immunodeficiency Virus (HIV) and Acquired Immune Deficiency Syndrome (AIDS) program, which is funded for $24 million for the coming fiscal year, at least is budgeted for. What I would ask is that you consider increasing that appropriation by at least $10 million to put it to the $34 or $35 million mark. What that would allow that program to do is to continue to be funded at a level funding.

I think you are aware that the military AIDS vaccine program and molecular epidemiology programs are leaders in the world today, and if they do not get that additional $10 million then they will have to cut back in programs which are ongoing and excellent programs already. If I can be of any assistance to you in that, I would be happy to do that.

The second issue I would like to call your attention to is the military overseas laboratories. The Army and the Navy have laboratories in five countries around the world where they do leading research on malaria, enteric infections, viral diseases, mosquito-borne, and other tropical diseases. Over the last decade the number of those laboratories has decreased from seven to five, with closure of laboratories in the Philippines and in Brazil and no increase in any laboratories anywhere around the world.

I think it may be time that you may want to consider looking at that program and deciding is that optimally configured in a way that meets the national security concerns of the U.S. military in infectious disease and emerging infectious diseases.

So I will keep it short and thank you very much for your support.

[The statement follows:]

PREPARED STATEMENT OF DR. DONALD BURKE

The American Society of Tropical Medicine and Hygiene (ASTMH) appreciates the opportunity to submit testimony to present our views on fiscal year 2002 funding priorities to the Subcommittee.

The ASTMH is a professional society of 3,500 researchers and practitioners dedicated to the prevention and treatment of infectious and tropical diseases. The collective experience of our members is in the areas of basic science, medicine, insect vector control, epidemiology, and public health.

DOD medical research programs play a critical role in our nation's infectious disease efforts. Furthermore, the programs are vitally important to maintain the health of our troops in the theater. Working with other U.S. public health agencies, DOD scientists at the U.S. Army Medical Research Institute for Infectious Diseases (USAMRIID), the Walter Reed Army Institute of Research (WRAIR), the U.S. Naval Medical Research Center (NMRC), and DOD medical laboratories abroad are helping us to better understand, diagnose, and treat infectious and tropical diseases. Such diseases include malaria, AIDS, dengue, leishmaniasis and other parasitic infections, cholera, and common diarrheal diseases, scrub typhus, and hepatitis.

Infectious diseases are the second leading cause of death worldwide, accounting for over 13 million deaths (25 percent of all deaths worldwide in 1999). Twenty well-known diseases—including tuberculosis, malaria, cholera, and Rift Valley Fever—have reemerged or spread geographically since 1973, often in more virulent and drug-resistant forms. At least 30 previously unknown disease agents have been identified in this period—including HIV, Ebola, Nipah virus, Marburg virus, and hepatitis C—for which therapy is not optimal or does not exist at all.

Last year the CIA's National Intelligence Council issued a report labeling global infectious disease a threat to U.S. national security. "The Global Infectious Disease Threat and Its Implications for the United States," concluded that infectious diseases are likely to account for more military hospital admissions than battlefield injuries. The report also assessed the global threat of infectious disease, stating "New and reemerging infectious diseases will pose a rising global health threat and will endanger U.S. citizens at home and abroad, threaten U.S. armed forces deployed overseas, and exacerbate social and political instability in key countries and regions in which the United States has significant interests."

As mandated in The Presidential Executive Order issued 30 September 1999, entitled "Improving Health Protection of Military Personnel Participating in Particular Military Operations," mandates that "It is the Policy of the United States Government to provide our military personnel with safe and effective vaccines, antidotes, and treatments that will negate or minimize the effects of these health threats." This includes diseases endemic to areas of military operations. Accordingly, the primary mission of the DOD's Military Infectious Diseases Research Program is to develop new products with which to protect and maintain the health of our troops in the theater. With worldwide deployment of our military personnel, it is imperative to protect them against infectious diseases that occur around the globe. Often our troops are exposed to new strains of a disease that does not exist within our own borders. Examples of the highly focused research conducted by the Program include efforts to make vaccines to prevent malaria and overseas strains of the AIDS virus.

In 1987 Congress mandated that the DOD establish the HIV Research program because of the significant risk of active-duty personnel in acquiring the HIV virus. 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. Among other federally-supported HIV research efforts, the DOD HIV Research program has the facilities, resources, collaborations, and personnel to produce novel candidate AIDS vaccines and test them in international locations.

ASTMH appreciates past Congressional support for military infectious diseases research. In November, 1999, the long awaited WRAIR/NMRC laboratory building opened in Silver Spring, Maryland. This outstanding laboratory facility is now the focus of tropical medicine research conducted by the Army and Navy. It is staffed by military and civilian experts in tropical medicine. The WRAIR and NMRC supervise and support the DOD's overseas laboratories.

The Society believes the military's overseas laboratories deserve special mention. The U.S. Army and the Navy currently support medical research labs located in five developing countries, including Thailand, Egypt, Indonesia, Kenya, and Peru. These research laboratories serve as critical sentinel stations alerting military and public health agencies to dangerous infectious disease outbreaks and increasing microbial resistance to drugs. The research stations are an important national resource in the ongoing battle against emerging disease, and should be strengthened with increased funding and increased opportunities for collaborations with civilian scientists. The laboratories provide field sites for testing of new drugs and vaccines, for performing basic research, and for increasing our understanding of disease and the spread of disease. The overseas laboratories strengthen collaborations between U.S. and for-

eign countries, expanding our knowledge and understanding of infectious diseases, and providing hands-on training for both U.S. and local students and investigators, and for local health authorities.

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 first modern drugs for prevention and treatment of malaria. 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 worldwide. 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. Specifically, malaria causes an enormous burden of disease in Africa, and is considered a primary cause of poverty.

Along with Venezuelan Equine Encephalitis, the DOD also developed or supported promising vaccines for prevention of Rift Valley Fever, Argentine Hemorrhagic Fever, Adenovirus disease in recruits, and plague. Two of these vaccines (plague and adenovirus) are no longer licensed in the United States. As a result of a significant outbreak in Saudi Arabia and Yemen, the first epidemic outside of Africa, Rift Valley Fever vaccine has become of interest to an important ally. Spread of this disease to the United States is not out of the question, since mosquitos capable of transmitting Rift Valley Fever are found in the United States. Further development of these vaccines is an important national priority.

Other notable advances accomplished by military experts in tropical diseases working with corporate partners include the invention of hepatitis A vaccine at WRAIR and its ultimate licensure based on studies conducted at the U.S. Armed Forces Research Institute of Medical Sciences (AFRIMS) in Bangkok; the discovery (during WWII), and later licensure of Japanese encephalitis vaccine, based on studies conducted at AFRIMS and WRAIR; and the discovery and licensure of mefloquine and halofantrine for treatment and prevention of malaria. WRAIR scientists reported the first successful cultivation of vivax malaria. A significant accomplishment made by military scientists at WRAIR and their corporate partners is the discovery of the first prototype vaccine shown to be capable of preventing falciparum malaria. Novel vaccines, such as a DNA vaccine for malaria, are being developed under the leadership of scientists at the NMRC. Most recently, licensure has been awarded for Malarone, a new drug for prevention and treatment of malaria. Another anti-malarial drug, Tafenaquine, is in advanced field trials with a corporate partner. With the certainty that resistance to malaria drugs quickly appears, these drugs have a useful lifespan of only about ten years. Replacements must be sought continually.

Request: ASTMH urges a strong 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 to improve global health and economic stability in developing countries. The DOD's Military Infectious Disease Research Program has been a highly successful program. ASTMH urges the Subcommittee to make DOD infectious disease research a high priority in the DOD budget for fiscal year 2002.

CONCLUSION

Our borders remain porous to infectious and tropical diseases, including most recently the West Nile Virus, which was recently found right here in Washington, DC. Other diseases still largely confined to the tropics, like malaria, pose a major threat to American travelers and especially to our military. In all military operations in the last century where malaria is transmitted, including the Pacific Theater in World War II, Vietnam, and Somalia, more casualties were caused by malaria than by combat injuries. And with global warming, the increasing resistance of insect vectors to insecticides, and the increasing resistance of the malaria parasite to antimalarial drugs, the range of malaria and other vector-borne diseases is expanding.

The ASTMH urges you to provide strong support for the DOD Military Infectious Diseases Research Programs. Our nation's commitment to this research is critically important given the resurgent and emerging infectious disease threats that exist today. If we don't make these important programs a priority, the health of our troops, as well as the health of all Americans, 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.

Senator STEVENS. Thank you very much, doctor. Are you associated at all with prion disease now?

Dr. BURKE. I am not.

Senator STEVENS. Is your department?

Dr. BURKE. I am not, although I do serve on a committee for the Food and Drug Administration (FDA) that looks at those issues.

Senator STEVENS. Thank you very much.

We will now turn to Meg Kulungowski, please. We have skipped one person. We have a Senator who wishes to be here personally at that time.

STATEMENT OF MEG KULUNGOWSKI, SENIOR ISSUES SPECIALIST, NATIONAL MILITARY FAMILY ASSOCIATION

Ms. KULUNGOWSKI. Mr. Chairman, Senator Inouye, thank you for the opportunity to appear before you today. The message I bring to you today is that the momentum begun with the actions of the 106th Congress must be sustained in addressing the critical issues facing our military families and their communities. In my brief oral testimony I would like to emphasize the issues of military health care, housing, relocation reimbursements, military spouse employment assistance, and full Survivor Benefit Plan (SBP) entitlements for survivors of members who die on active duty.

Last year's Defense Authorization Act included many health care provisions beyond TRICARE for Life, which the National Military Family Association (NMFA) wants to ensure are fully implemented. NMFA urges Congress and the Department of Defense to work together to obtain an adequate, sustainable funding level for the defense health program. This funding is needed to sustain the ongoing functions of the program, to include the maintenance and improvement of the infrastructure at military treatment facilities, and to fully implement newly authorized benefits.

We look to the housing privatization initiatives to help expand the housing base at installations where the community sector cannot meet the military families' need for adequate, affordable housing in a safe neighborhood with good schools. The privatization initiative will allow military construction funds to be directed to overseas areas. Military families overseas tell NMFA that the predominance of substandard, poorly maintained housing is their number one quality of life concern.

Overseas installations do not have their own local Congressional advocate. We ask this subcommittee to be the advocate for families overseas and ensure adequate resources for their communities.

Military families move on average of every 2.9 years, twice as much as their civilian counterpart. A 1999 DOD survey of permanent change of station moves found that service members reported average out of pocket expenses of over $1,100 with each move. NMFA believes military members must be compensated at a more realistic level for their moving costs. Families will continue to subsidize their military-directed moves if rates for mileage, per diem, and temporary lodging expenses are not raised to reflect today's costs.

The financial impact of a move is often exacerbated by the loss of the spouse's employment. NMFA is encouraged by initiatives coming from the DOD-U.S. Chamber of Commerce military quality of life partnership that promote training, education, and employment of spouses through corporate partnering. However, this program still needs funding for its startup and to guarantee its long-term stability.

Additionally, we hope that as legislation is crafted to address the national shortage of nurses, teachers, and child care providers, there will be provisions to include military spouses in spite of their frequent relocations.

Lastly, I will briefly discuss the issue of SBP for active duty deaths. Authorizing the Department of Defense to conduct posthumous retirements could solve the issue of SBP for active duty deaths. Senator Kay Bailey Hutchison is considering a bill which would do just this. This would eliminate imminent death retirements and the burden imposed on military medical professionals asked to perform life-saving measures while the necessary retirement paperwork is prepared.

Additionally, it would eliminate the disparity of benefits paid to survivors if one member of an accident was killed immediately and another lives long enough to be retired.

The U.S. armed forces are fortunate that the numbers of active duty deaths each year are few, but the changes of benefits to individual families would be significant.

We thank the subcommittee and the Congress for the attention over the past 2 years to the quality of life issues important to the readiness of the force and to military members and their families. These actions have helped rebuild military members' trust and to ease the crisis in recruiting and retention. However, the stability of the military family and community rests on the Nation's continued focus on the entire package of quality of life components.

Again, Mr. Chairman, I thank you for this opportunity.

Senator STEVENS. Thank you very much. We appreciate your coming.

[The statement follows:]

PREPARED STATEMENT OF MEG KULUNGOWSKI

QUALITY OF LIFE ISSUES FOR MILITARY FAMILIES, APRIL 2001

Distinguished Members of the Subcommittee, the National Military Family Association (NMFA) is honored to have the opportunity to discuss the quality of life of military families. NMFA is grateful to the Congress for continuing the efforts begun two years ago to end the erosion in quality of life that has contributed to the military Services' recruiting and retention challenges. Of particular importance were:

—Provision for a 3.7 percent pay raise, payable January 1, 2001 and for targeted raises for mid-grade enlisted personnel, effective July 1, 2001

—Funding increases for the Basic Allowance for Housing with the goal to eliminate average out-of-pocket costs by 2005

—Health care benefit improvements for active duty families such as the elimination of co-payments for active duty family members in TRICARE Prime, the addition of a Prime-like benefit for active duty families in remote locations, and the addition of school physicals as a TRICARE benefit

—Health care benefit improvements for the retiree population such as the reduction in the catastrophic cap, the creation of a pharmacy benefit for Medicare-eligible military beneficiaries, and the restoration of the promise of lifetime care for military retirees and their dependents with the creation of TRICARE for Life.

—Funding to assist civilian school districts in educating military children.

NMFA believes that the most important message we can bring to you today is that the momentum begun with the actions of the 106th Congress must be sustained in addressing the critical issues facing military families and their communities—pay, housing, health care, family support, and education for our children. The families we represent, including our 120 installation representatives who report to us on a regular basis, say they recognize the good that the recent improvements will bring. They also tell us, however, that we are not out of the woods yet. Several concerns continue to take their toll: a continuing civilian/military pay gap, a decaying housing and workplace infrastructure, ongoing deployments and high perstempo that increase family separations, a health benefit that changes based on where one lives and how much money is available for the system, and a military move process that disrupts a spouse's career and a child's education while frequently draining a family's savings.

Military Families Today—Who Are They?

The all-volunteer military today is predominantly a young, married force with children. Currently, 55 percent of the military is married; 56 percent of the married population is between the ages of 22 and 29. Studies show that military members tend to marry younger, begin to have children at a younger age, and have larger families than their civilian peers. Nearly one million children, or 73 percent of all military children, are under age 11; 40 percent are five years of age or younger. Approximately 6 percent of military members are single parents, ranging from a low of 3 percent of Marines to a high of almost 8 percent of Army members. Eighty to ninety percent of all spouses are in the labor force, including 87 percent of junior enlisted spouses (E–1 to E–5).[1]

Quality of Life Components for the Military Family Relocation

One of the primary challenges facing military families is the frequency with which they move. Along with the death of a family member, loss of a spouse, and natural disasters, moving and unemployment rank among the top five stress producers in the population as a whole. Military families move on average every 2.9 years; the civilian average is twice that figure. No other employer moves its youngest employees with the frequency that the military moves its junior servicemembers.

Moving is a fact of life for military families. Unfortunately, losing money whenever they move is just as predictable a fact for military families. A 1999 DOD survey of Permanent Change of Station (PCS) moves found that servicemembers reported average out-of-pocket expenses of over $1,100 with each move. The average reimbursement for reimbursable expenses was only 62 cents on the dollar; for junior enlisted members, only 27 cents. These rates do not include the loss of either the spouse's job or the servicemember's second job that helped the family make ends meet. They do not include the extra expenses such as house hunting trips that are not reimbursed.

NMFA urges DOD and the Services to build on the information gathered from the current array of pilot move projects to institute a more user-friendly move process. Because we believe the pilots have the potential to provide much-needed information on how to fix the move process, we were greatly disturbed by press reports of the Navy's pull-out of the pilot projects. This is too important an issue for families and too much information is being accumulated through these pilots to abandon them now.

NMFA believes military members must also be compensated at a more realistic level for their moving costs. Legislative changes in the fiscal year 2001 NDAA addressed some concerns by authorizing temporary lodging expenses for enlisted members going to their first duty station, increasing the dislocation allowance for E–1 to E–4s with dependents to the E–5 rate, and authorizing servicemembers on PCS moves to receive advance payment for their travel allowances, thus enabling them to avoid incurring large credit card debt. The families sent to locations with costly pet quarantines are also grateful for the authorization of a $275 allowance to help cover quarantine costs. We believe, however, that families will continue to foot the bill for too many legitimate reimbursable expenses unless the rates for mileage, per diem, and temporary lodging expenses are raised to reflect today's costs. These rates have not been adjusted since the mid-1980s and thus do not reflect families' actual travel and lodging costs.

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[1] Demographic information has been obtained from the Profile of the Military Community: 1999 Demographics, prepared for the Deputy Assistant Secretary of Defense for Military Community and Family Policy by the Military Family Resource Center, available at www.mfrc.calib.com.

Another unique aspect of a military move is the unpredictability. NMFA hears from families about orders being changed or not issued until the eleventh hour. In the 1999 PCS survey, 20 percent of the participants reported receiving less than 30 days notice before the move and about 11 percent reported having a change in the assignment after getting their initial orders. Last minute switches place an additional burden on the spouse who typically is the one to research schools and neighborhoods, find a new job, and reassure the children that they will indeed fit in at the new location. Although online relocation information provided by the Services may help reduce anxiety and enable families to prepare for the move, NMFA believes the personnel system still has room for improvement in its ability to forecast assignments, particularly follow-ons from unaccompanied tours.

Spouse Employment and Readiness

Another fallout from the frequent military move cycle is the cut in family income due to the military spouse's loss of employment. The loss of the spouse's income at exactly the time the family is facing hundreds of dollars in additional expenses is exacerbated when a spouse is unable to collect unemployment compensation due to provisions of state laws. In many states, the military spouse is not eligible to collect unemployment compensation when the change of jobs is due to the servicemembers' change of duty location. States frequently determine that the decision of a military spouse to move with the servicemember is a "voluntary quit" and thus they deny the benefit.

"Trailing spouses" face other difficulties after the move experience is over and boxes unpacked. Despite the existence of highly touted DOD and Service spouse employment programs, many spouses still report problems finding jobs commensurate with their skill and experience levels or even any job at all. In 1999, 46 percent of installation commanders reported that availability of jobs for spouses was a problem in their communities. Because of the high costs of the military move, many spouses are forced to take the first available job just to make ends meet, regardless of whether or not it furthers their career. When the spouse's earnings suffer as a result of the military member's service, the member's career intentions decline. The prospect that the spouse would have to give up a good job—found with difficulty—and start over again after the next move may prompt a family decision that the servicemember should leave the military.

NMFA has heard from spouses for years about the problems they faced in navigating the DOD personnel system. In recent testimony before the Defense Subcommittee of the Senate Appropriations Committee, the Chief Nurses of both the Army and Navy discussed their program's difficulties with the personnel system in ways very familiar to military spouses. According to BG William T. Bester, Chief of the Army Nurse Corps, "Government hiring practices are archaic, cumbersome, and threaten human resource availability. Wages are set by law and not easily adapted to market forces. We must have the flexibility to develop and implement accession programs that meet the current critical need for the swift hiring of highly qualified candidates." If the Army Nurse Corps can't work the system, how can we expect young military spouses to navigate their way?

While still having work to do on its own personnel system, DOD has made strides in seeking corporate partnerships to establish training and employment programs for military spouses. NMFA applauds the department's efforts to establish procedures to use scholarships and child care subsidies from industry for military spouses. The department is also investigating how to help spouses obtain certification, whether in a trade or a professional field. DOD has eased one group of military spouses' job placement difficulties over the past year: DOD schools now have policies in place that encourage the hiring of qualified military spouses for open teaching positions.

Education for Military Children

Military children are our nation's children. Whether they attend Department of Defense schools, civilian public schools, private schools, or are home schooled, they deserve a quality education. Today's military force is an educated force and 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.

Even when transferring to schools with the best reputations, military children often face hurdles in getting placed in proper programs, becoming involved in extracurricular activities, and transferring grades and credits for graduation. Their parents are often frustrated because they do not understand how to navigate the new system's procedures and policies in order to provide proper input on their children's

education. The increase in state accountability systems and high stakes testing, each with different standards, can also make transferring from school to school difficult for military children. NMFA applauds DOD's creation of the Educational Opportunities Directorate to address the needs of all military children wherever they go to school. The Directorate is currently conducting a series of roundtables in states with high military populations to raise awareness of issues affecting the mobile military child among parents, state and local educational leaders, and installation officials. The military Services are dedicating more efforts to improve communication with local school districts, institute partnerships between units and local schools, and provide assistance for parents in navigating school district chains of command to obtain the proper educational services for their children.

NMFA thanks this Subcommittee for its support of schools operated by the Department of Defense Education Activity (DODEA). Because approximately 80 percent of military children attend civilian public schools, however, NMFA is also grateful to the Congress for its support of quality education for these children and their civilian classmates. Appropriations for the DOD Impact Aid Supplemental Funding helps those districts most affected by the military presence.

Child Care

In ten years, the military has transformed its child care system from one of the nation's worst to what has been called a model for the nation. A military force often asked to go in harm's way needs to be able to go to work and not worry about what is happening to their children.

Although we believe that families' cost for military child care are still reasonable given the quality found in military child development centers, NMFA does see some challenges for DOD in meeting child care needs without breaking the bank. DOD must continue to build new child development centers where needed, and increase efforts to recruit and train more family care providers. Family day care providers are an alternative for families when child development centers are full or for military members needing after-hours care. The fiscal year 2000 NDAA allowed DOD to "provide financial assistance to an eligible civilian provider of child care services or youth programs." DOD and the Services need to fully utilize this authorization to increase the availability of child care.

Military Family Health Care

Military families appreciate the health care improvements contained in the fiscal year 2001 NDAA and thank the Congress for addressing many of the issues they have raised about the military health care benefit. By restoring the promise of lifetime health care to Medicare-eligible military beneficiaries through TRICARE for Life and the senior pharmacy program, Congress also told current servicemembers and their families that their own service to the nation is appreciated and that the government will continue to show it values that service even after the member retires. By eliminating co-payments for active duty family members in Prime and by establishing a Prime-like benefit for all remotely-assigned active duty family members, you moved us closer to achieving a uniform benefit.

However grateful we are for the important benefit improvements in the NDAA and for the opportunity for beneficiary input provided by DOD, NMFA remains apprehensive about the estimated $1.4 billion deficit in this year's Defense Health Care budget. In recent testimony before the Defense Subcommittee of the House Appropriations Committee, the Service Surgeons General stated that their military treatment facilities would have to cut back on operations this summer unless supplemental funding was provided. They also discussed the significant repair and maintenance backlogs and the infrastructure needs of their facilities.

Dr. Jared Clinton, Acting Assistant Secretary of Defense for Health Affairs, testified that the elimination of co-payments for active duty families and the expansion of the TRICARE pharmacy benefit to Medicare-eligible military beneficiaries are on target for their April 1 implementation and the implementation of TRICARE for Life as a second-payer to Medicare will begin on schedule October 1. Dr. Clinton also noted, however, that implementation of several benefits that became effective with the passage of the NDAA may have to be delayed because of lack of funding. These benefits include the reduced catastrophic cap, the school physical benefit, and the reimbursement for travel expenses for active duty families in TRICARE Prime who must travel over 100 miles for specialty care.

NMFA is grateful for the fiscal year 2000 NDAA Congressional mandate and DOD's response in implementing the new Women, Infants and Children Overseas (WIC–O) Program. Since January 2001, the TRICARE Management Activity with the cooperation of the Defense Commissary Agency and command and local installation family support personnel has implemented WIC–O in 5 overseas areas. After

years of hearing from military families who lost access to this federally-funded, but state run, program because the military was sending them overseas, NMFA is excited that this valuable nutrition program is now available to at least some families. Although DOD has begun plans to implement a second phase of the program at 12 more sites by the end of the summer, we are concerned that funding shortfalls in the Defense Health Program, the funding agent for WIC–O, will delay complete implementation until sometime next fiscal year.

Beneficiaries rarely complain about the quality of care they receive in the military health system. Many do complain about accessing appropriate care in a timely manner. The DOD Healthcare Quality Initiatives Review Panel, a federal advisory panel chartered by Congress in Public Law 105–174 to assess quality initiatives in the military health system, recently sent its report to Congress. In its chapter on Beneficiary Communications, the panel concluded: "To beneficiaries, the issue of quality of healthcare cannot be separated from a discussion of access and the robustness and uniformity of healthcare benefits." Although the improvements in TRICARE procedures and the benefits added in the NDAA will improve access for many beneficiaries, program-funding issues could provide additional constraints.

NMFA urges Congress and DOD to work together to obtain an adequate, sustainable funding level for the Defense Health Program. This funding not only is needed to provide the newly-implemented benefits, but also to sustain the ongoing functions of the program, implement WIC–O at all locations overseas, and maintain and improve the infrastructure in military treatment facilities (MTFs).

Supporting Families for Readiness

As NMFA has testified in the past, a variety of factors place and keep young military families on the financial edge:

—Frequent PCS moves
—Transportation expenses
—Out of pocket housing costs
—A lack of comprehensive financial education, either before the member enters the military or for both servicemember and spouse once in the military, making the family more vulnerable to consumer scams, unable to budget properly, or make the best spending and saving decisions
—Poor access to affordable credit
—Frequent deployments or the threat of deployments that cause either a loss in the family's second income or increase child care costs
—The consequences of recruiting someone with a family and expecting them to live on a salary more appropriate for a single person in the barracks.

NMFA believes that DOD and the Services must provide young families with the tools they need to handle the disruptions so common in military life so that the servicemember can perform the mission. We encourage outreach efforts by installation family service personnel and other program staff to reach young families unfamiliar with both the military lifestyle and the benefits that come with service. For example, we applaud the efforts of family service and commissary staff to educate both single servicemembers and young families about the value of the commissary benefit by holding special information events and commissary tours. The Defense Commissary Agency's best value program and other initiatives to reduce prices have resulted in average customer savings of 29 percent.

NMFA also commends the increased DOD and Service efforts to improve both the amount of and quality of financial education offered to servicemembers. We are encouraged by Service interest in including spouses in financial education and teaching them how to fulfill their responsibilities for managing family finances when the servicemember is deployed.

As operations, deployments, and training missions continue at a high pace, the military family's lifeline—its community—feels the strain. Family services are important even to an installation not pressured 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, provide financial counseling and other services, offer programs for families in the Exceptional Family Member Program, and sponsor meaningful activities for military youth, especially in the vulnerable preadolescent years. Additional services set up to support families when units deploy include counseling services, email and video teleconferencing centers, and special family activities. These services both ease the strain of deployment for families left behind and reassure the servicemember that the family has a support network on which to call.

NMFA notes that the services have done a magnificent job in supplying e-mail communication, education programs, and a wide array of Morale, Welfare, and Recreation (MWR) programs for forward-deployed units. Some of those

servicemembers have deployed from installations in Europe. Their family members left behind at many of those installations tell NMFA of cutbacks in MWR services in their communities because of tight budgets or the inability of program managers to hire employees at current pay scales. USAREUR Commander General Montgomery Meigs spoke to the press last year of problems funding quality of life programs in his communities: "In USAREUR, we fund training at 100 percent, and frankly we don't have enough for quality of life." Families talk of unpredictable or shortened hours at bowling alleys, swimming pools, and other recreational facilities used heavily by military children. While families understand the importance of quality programs for deployed servicemembers in Bosnia, they ask that money be found so their commanders can also help the spouse in stairwell housing in Germany trying to keep the children occupied until the deployment is over.

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 live on an installation, with an ongoing relationship with a local unit, when the servicemember deploys. Many others, however, find themselves isolated in a civilian community without access to military support networks.

Reserve Family Support

Men and women of the National Guard and Reserve contribute more than 13 million duty days to missions and exercises. Ten years ago when reserve forces had about 22 percent more personnel, they averaged approximately 1 million duty days. Just like their active duty counterparts, the Guard and Reserve are doing more with less. The integration of reserve components into the Total Force includes their families. Now more than ever, reserve component families are dealing with extended overseas deployments and for some on a fairly continual basis.

Another unique aspect of family support in the reserve component is the geographic dispersion of the members and their families. Unlike the active component divisions that are usually co-located on one installation, most reserve component divisions are spread over many states. The family does not usually have the military community support or even the recognition in their civilian community that the servicemember is deployed. In these cases, truly, "an ounce of prevention is worth a pound of cure." Reserve family members' awareness of their rights and benefits before the deployment and how to access information and support during deployment are essential to the unit's readiness.

Survivors' Benefits in Active Duty Deaths

Although most active duty family members do not dwell on the tragedies that can occur to servicemembers in the line of duty, these incidents do happen and focus attention on inequities in the provision of survivors' benefits. The current benefits for survivors of active duty deaths include Dependency and Indemnity Compensation (DIC) payments from the Department of Veterans Affairs and Social Security survivors' benefits. If the servicemember had over 20 years service, the survivors also receive Survivor Benefit Plan (SPB) benefits, which are 55 percent of what the members' retired pay would have been. This is a valuable benefit that NMFA worked for years to achieve.

The problem in the provision of benefits comes when servicemembers not eligible for retirement are involved in fatal incidents. If the servicemember is only one month shy of retirement eligibility, for example, and is killed instantly, the surviving spouse does not receive SBP. If, however, the servicemember lived long enough to be medically-retired, the spouse would receive SBP. This difference in the way benefits are determined can mean the survivors of two members with the same rank and length of service killed in the same accident will receive different benefits simply because one is killed instantly and one lives just long enough to be medically-retired. NMFA believes that the Services should be allowed to award posthumous retirements so that all survivors in active duty deaths may be able to receive SBP.

Housing: a 3-Prong Approach: BAH, Privatization, Military Construction

Families living off-base 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. BAH is the first of DOD's three-prong approach to addressing the housing needs of servicemembers and their families. NMFA thanks Congress for the repeal of the mandate requiring servicemembers to

pay 15 percent of their housing costs out of pocket. We also applaud the beginning of funding toward a five-year plan to eliminate out of pocket housing costs.

NMFA was pleased with DOD's efforts this year to improve the accuracy of the housing cost surveys used to determine BAH. Installation commanders and their housing officials worked with the DOD contractor to identify appropriate neighborhoods for servicemembers and their families and obtained additional information on utility rate increases in the late fall before making final BAH calculations. We do remain concerned, especially given recent utility hikes, that BAH may need to be more flexible to respond to cost changes that could have a negative impact on family finances.

Although the plan to eliminate out of pocket housing costs is admirable, NMFA fears that the rhetoric may not always match reality. BAH is based not only on the costs of renting and paying utilities on a dwelling, but also on a DOD standard set for each rank. The standard used for determining the rent for an E–5, for example, is a two-bedroom townhouse; therefore, an E–5 with three children who is renting a three-bedroom single-family detached house will still have out of pocket housing costs even after the buy-down is complete in 2005. NMFA believes the DOD housing standard is not commensurate with current civilian housing standards, on-base housing standards, or with the level of responsibilities shouldered by military personnel. For example, the current standards provide that among enlisted servicemembers, only E–9s receive BAH to cover the cost of renting a three-bedroom single-family detached house. If the standard is left unchanged, servicemembers will probably continue to have out of pocket housing costs despite the well-publicized promises to the contrary. In the fiscal year 2001 NDAA, Congress raised the standard slightly for the most junior enlisted, E–1s to E–3s, to a level between the E–3 rate (two bedroom apartment) and the E–4 rate (two-bedroom townhouse). NMFA urges the Congress to direct DOD to do an across-the-board review of the standard's appropriateness across all ranks.

Since the law creating the housing privatization authorities was first passed, NMFA has regarded the concept of privatization, the second prong in DOD's housing approach, as perhaps the only way to meet the housing needs of military families in a timely manner. We know the need. We have seen and lived in the houses that are a part of the repair and renovation backlog of almost 200,000 units worldwide. We know how far this housing is from today's standards, especially for our special needs family members. We have seen the housing available outside the gate in many communities. Families who cannot get into base housing end up living in slum conditions because they cannot afford the transportation necessary to live farther from the installation. In recent testimony, Randall Yim, Deputy Under Secretary of Defense (Installations), stated that DOD would need $16 billion and more than 30 years to eliminate the backlog using traditional military construction funding. Using privatization would substantially solve the problem in much less time, although probably not by DOD's target date of 2010.

Although we see the need for the infusion of private capital to revitalize military housing, NMFA has watched early privatization efforts with some concerns:

—Where are the standards for oversight of the development process and the outcome measures to gauge a project's long-term costs and benefits?
—Who provides oversight of housing management and maintenance?
—What is the role of the installation commander?
—How is community input sought and used in the process?
—Who is the advocate for family members living in the housing?
—How are the projects' effects on servicemembers' budgets and community services evaluated and calculated into project plans?
—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?

Although we understand the need for project flexibility to meet the needs of local installations and communities, NMFA asks Congress to continue its oversight of the privatization process and work with DOD and the Services to establish a common core set of standards and outcome measures for privatization projects.

NMFA is gratified that some attention is being paid to the needs of the community, both on and off the installation, when new housing is to be built. Changing transportation needs, recreational needs, and child care options should be part of the decision-making process with each of these projects. The educational needs of military children and the local school district's ability to meet those needs are of paramount importance to a successful privatization initiative. We are encouraged that service officials now can articulate the link between the ownership of the land and federal Impact Aid funding for schools serving military children. Impact Aid, however, provides money school districts use to pay the operating expenses—teachers' salaries, utilities, and textbooks—for educating these children. It will not cover

the cost of building the school that is needed when the installation's housing stock is increased under privatization arrangements.

We also caution installation leaders to be aware of some unintended consequences of privatization on both family budgets and school district funding. The law requires that servicemembers living in privatized housing be paid BAH, which is then turned over to the developer as rent. Eligibility for safety net programs administered by the U.S. Department of Agriculture such as food stamps; the Women, Infants, and Children (WIC) nutrition program; and free and reduced price school lunches is based on a family's total income. When an installation's housing is privatized and servicemembers start receiving BAH, the total income as indicated on the Leave and Earnings Statement (LES) seems to have increased, even though the BAH is turned over to the developer. Many servicemembers then lose eligibility for safety net programs. Press reports state, for example, that two-thirds of the families receiving food stamps on Fort Carson lost their eligibility once the housing was privatized. When families lose eligibility for free and reduced school lunches, their local school can also lose other funding. Federal Title 1 and E-rate technology funding as well as state poverty funding is based on a school's poverty rate, which in turn is based on the percentage of children receiving free and reduced lunches. Fountain-Fort Carson District 8, a district of approximately 4,900 children, reports that it received $400,000 less in funding from these sources in the year after installation housing was privatized and servicemembers on Fort Carson began receiving BAH.

NMFA believes that the third prong of housing improvement, the use of military construction funds, must remain as a viable, well-funded option. 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, not just for housing but also for the underlying infrastructure. A recent article in the Honolulu Advertiser (2/26/01) described military housing challenges in Hawaii, but also highlighted extensive improvements. Navy junior enlisted families praised new housing featuring wooden cabinets, ceramic tile entryways, and steel framing to battle termites. Unfortunately, this wonderful new housing was built on an old worn-out sewer line. One sailor described his new home as "great," but said: "What we don't like is it is the same old neighborhood and the sewer lines are 30 years old. They back up."

The Military Community—Ready to Meet the Mission

Members of the uniformed services are doing the nation's work. They ask the nation to give them the tools they need to be ready for that work: equipment, training, and leadership. They also look to the nation for recognition that their job is not a nine to five one and that it involves their families in ways few other jobs demand. Military members and their families want the nation to understand that the military family drives the retention decision, that the family's quality of life is a readiness requirement, and 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. With gratitude for your help in the past, NMFA asks you to maintain your support for the military families we represent. The military community is not just bricks and mortar. It is the stabilizing force that enables military families to survive and thrive. Your continued help is needed to keep that community strong.

Senator STEVENS. Dr. Boudjouk. We are informed that the Senator cannot be here because of a conflict and would be pleased to have your testimony now, sir.

STATEMENT OF PHILIP BOUDJOUK, Ph.D., CHAIRMAN, COALITION OF EPSCoR STATES

Dr. BOUDJOUK. Thank you very much, Mr. Chairman. Mr. Chairman, members of the committee, my name is Philip Boudjouk. I am a professor of chemistry and Vice President for Research at North Dakota State University. I served as the Project Director for the Experimental Program to Stimulate Competitive Research (EPSCoR) program in North Dakota from 1992 to 2000. I currently serve as Chairman of the Board of the Coalition of EPSCoR States.

Thank you for the opportunity to testify today on behalf of the 19 States and Puerto Rico that comprise the coalition regarding the Defense Department's basic scientific research program and the defense experimental program to stimulate competitive research

(DEPSCoR). Next month the DOD will make a site visit to Hawaii to evaluate its eligibility for DEPSCoR and Alaska is now in its second year as an EPSCoR State.

I wish to commend the subcommittee for its strong support for funding DOD S&T programs. The Coalition of EPSCoR States urges you to maintain a stable investment in the Department's S&T efforts. The coalition would like to be associated with the statement of Dr. Harvey Ko, who testified earlier this morning on behalf of the Coalition for National Security Research.

EPSCoR is a catalyst for change to assist States which historically had not participated fully in Federal research and development funding. It is widely viewed as a model Federal-State partnership involving several Federal agencies: DOD, National Science Foundation (NSF), National Institute of Health (NIH), DOE, National Aeronautics Space Administration (NASA), EPA, and United States Department of Agriculture (USDA). Every Federal dollar is matched between 50 cents to more than a dollar by State funding and technically every dollar provided to EPSCoR State projects leads to four dollars of nationally competitive Federal funding.

The defense EPSCoR program contributes to the States' goals of developing and enhancing their research capability. Research is funded only if it is in areas important to national defense. In North Dakota 24 DEPSCoR projects in science and engineering have been funded since 1994. It is a true partnership between DOD, the State of North Dakota, and the universities involved.

We have DOD-sponsored projects in logistics, database development, encryption science, and a variety of materials-based programs that include anti-corrosion studies for military aircraft and the development of semiconductor materials composed of quantum dots, particles less than one ten billionth of a meter. We will embed these nanoparticles in polymers to make a new class of materials called nanocomposites.

The sky is the limit here. One could say that the smaller the particle the larger the potential for scientific and technical answers. Mr. Chairman, this is a very exciting new area of research and it will provide our military with new war-fighting capabilities for the twenty first century.

DEPSCoR is a wise and worthwhile investment of scarce public resources. The coalition recognizes the very tight fiscal constraints the subcommittee faces in the new era of a balanced Federal budget. But given the impact that the DEPSCoR program is having in our States, we respectfully request that you provide $25 million for the Defense EPSCoR program for fiscal year 2002.

Mr. Chairman, the Coalition of EPSCoR States supports the Defense Department's basic research programs, functions 6.1 and 6.2. It is essential that Congress ensure that 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. We strongly endorse recommendations that Congress provide $10 billion to DOD science and technology programs for fiscal year 2002.

Mr. Chairman, it was at this hearing a year ago that you, referring specifically to nanotechnology, urged States like Alaska and North Dakota to get on the train before it leaves the station, so to speak, and bring our resources to bear on the needs of DOD in this

vital area. In North Dakota, with the urging and assistance of Senator Dorgan, we took that advice to heart and formed a partnership with the University of Alaska in Fairbanks, North Dakota State University, DARPA, and the Defense Microelectronics Agency to launch a joint effort to meet DOD needs in the area of ultra-low power sensors for battlefield applications.

But DOD is only part of this new team. Also included are three private sector partners—Alien Technology, Northrop Grumman, and Superconducting Technologies, Incorporated—that are providing new technologies critical to the next generation of sensors.

Mr. Chairman, I have in my hand a vial containing thousands of computers. You see, each one of these particles that are suspended in water, that look no more than the size of a fleck of pepper, each one of those particles is a computer chip with the capacity to hold the entire history of a piece of equipment, to sense chemicals in the air, or store a program that can enhance, confound, or make a weapon obsolete in an instant.

In the partnership I mentioned, we are engaged in using a new technology that allows us to place millions of these chips exactly where we want them.

[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 (DEPSCoR).

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 served as the Project Director for the EPSCoR program in North Dakota from 1992–2000. 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 recommends that Congress appropriate $25 million to the Defense Department's budget for the Defense Experimental Program to Stimulate Competitive Research in Program Element Number PE 61114D. The Coalition also supports the Department's budget request for basic research, of which the Defense EPSCoR program is a small, but significant, part.

The Coalition wishes to be associated with the statement of Dr. Harvey Ko who testified earlier this morning on behalf of the Coalition for National Security Research (CNSR). This Subcommittee has long demonstrated its strong support for funding Defense Department science and technology programs. These are programs that have produced the research and innovation that have contributed so much to ensuring that our fighting men and women have the best available systems and weapons to support them in executing their national defense missions. Fundamental research and development efforts in our universities and laboratories produce significant benefits for the people in the field and on the front line. The Coalition of EPSCoR States urges you to maintain a stable investment in the Department's S&T efforts.

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

[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.

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 research goals of the Department of Defense. 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 F–22 fighter planes. This center has strong support from the Department of Defense 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.

In fiscal year 2001 the Defense Department issued an announcement of a competition under the aegis of the Defense EPSCoR program. A total of 224 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), 63 projects were selected for funding with $18.7 million made available in fiscal year 2001. The average award was $298,000.

Let me now tell you something about our program in North Dakota. Twenty-five 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, i.e., less than one ten billionth of a meter. Semiconductors in this form open the door to a 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, nanocomposites. 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 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. Indeed, Mr. Chairman it was at this hearing a year ago that you urged EPSCoR states to "get on this train before it leaves the station", so to speak. In North Dakota, we took that good advice to heart and formed a partnership with the University of Alaska in Fairbanks, DARPA and Defense MicroElctronics Activity (DMEA), to launch a joint effort to meet DOD needs in the area of ultra low power sensors for battlefield applications.

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, the University of Dayton Research Institute 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 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.

In addition to these projects in North Dakota, I would like to share with you a few examples of DEPSCoR funded research in other States:

—An Assistant (now Associate) Professor of Physics at the University of Kansas, Dr. Judy Wu, was funded by the Air Force Office of Scientific Research (AFOSR) to perform research on high temperature superconducting thin films. As a result of that DEPSCoR support, she has developed methods for coating mercury-based high temperature superconductors onto oxides and metals in processes that have led to two United States patents, and one U.S. patent pending. Superconducting coatings of these materials, that have transition temperatures above 130K onto oxides, can be used for superconducting microwave telecommunication devices of superior performance in terms of low loss, high resolution, and lightweight. These properties have recently been demonstrated on small-scale microwave devices. Superconducting coatings of these superconductors onto metals can be used to form superconducting cables that can be used for power-related applications including low-loss/high power generators, transmission cables, electric motors, and high-field magnets.

—A land mine detector developed by Dr. James Sabatier, a research scientist at the University of Mississippi based National Center for Physical Acoustics, has passed a second round of military tests, making it the most accurate mine-hunting system in the U.S. Army's inventory. The system, via sound waves and laser beams which scan the ground's surface to detect and identify vibrational patterns produced by buried mines, detected 95 percent of the hidden antitank mines with only one false alarm and 100 percent of the buried antipersonnel mines with four false alarms.

—Dr. P. Stanley May, Associate Professor of Chemistry at the University of South Dakota (USD), has built on his successful DEPSCoR grant, "Energy Transfer Mechanisms in Lathanide Pairs in Up-conversion Materials," and secured major funding from NSF for a collaborative USD/South Dakota State University (SDSU) Photodynamics Research Cluster. Dr. May's research studies, which were supported by the Army Research Office, explore how interactions between different phosphors can be exploited to make novel phoshpor materials called "upconverters." Upconversion phosphors have the unique ability to produce high-energy light using low energy exitation. One potential use of such phosphors would be in the development of "blue" lasers, important in atmospheric sensing applications, which could be powered by batteries or solar panels.

—The University of Wyoming's DEPSCoR project on "Elastic Spider Silks" has resulted in the cloning and sequencing of the gene for the protein that makes up flagelliform or capture spiral silk. This silk has an elasticity of over 200 percent

and tensile strength of approximately 100,000 psi. Dr. Randolph Lewis, a molecular biologist, was funded by the Army Research Office. The work resulted in two major publications in The Journal of Molecular Biology on the sequence of the cloned cDNA, and in Science on the gene structure of the protein. The gene structure is unique in that the coding and non-coding regions together are repeated numerous times. Even more striking is the fact that the non-coding regions are more highly conserved in DNA sequence than are the coding regions. This suggests that these regions are required to keep this very large repetitive gene stable during replication of the DNA. In addition, a patent has been issued for the sequence of the silk protein and gene.

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 long-standing 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 2002.

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. It is important that this Committee ensure that the fiscal year 2002 budget request keeps pace with the needs of science and technology. The Coalition of EPSCoR States supports realistic funding levels that help sustain vigorous science and engineering research programs at the Defense Department.

Thank you for your consideration of this request.

Senator STEVENS. Doctor, I am going to have to stop you. We have to keep going here if we are going to hear everybody. We all have a vial of those. As a matter of fact, several people have been by giving me a vial of them. We are very pleased about your arrangements with the university. We will do our best.

Did you say billion dollars, $10 billion?

Dr. BOUDJOUK. For the S&T, $10 billion for DOD S&T programs for fiscal year 2002.

Senator STEVENS. Thank you very much. I appreciate it.

We urge witnesses to understand our situation. We are both going to have to leave here soon and we do want to listen to as many people as we can.

Ms. Goldberg. Good morning.

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. Chairman Stevens, Senator Inouye, thank you. I am Joan Goldberg, Executive Director of the

American Society for Bone and Mineral Research. I represent 3,500 researchers and clinicians dedicated to promoting bone and mineral research and bone health, as well as the National Coalition for Osteoporosis and Related Bone Diseases.

We thank you for this opportunity to testify on the need for sustained funding of the Department of Defense's unique research program in osteoporosis and related bone diseases. This small but important research program directly affects military readiness. We are grateful for the subcommittee's past support. We believe the $11 million appropriation will ensure the stability of this program in fiscal year 2002.

Bone diseases and bone fractures occur in all populations and all ages. They are devastating diseases and disorders with disabling and costly effects. For a military population, the most common bone problem is stress fracture. It was the Department of Defense's recognition of the extent of this problem that led to a commission of the report by the Institute of Medicine.

What do we know about stress fractures? They are overuse injuries. Muscles become fatigued and are unable to absorb added shock. Eventually, the fatigued muscle transfers the overload of stress to the bone and this causes the tiny crack that we call a stress fracture. The crack is not always easy to see and new diagnostic methods are needed and being researched now by DOD-funded researchers.

Stress fractures often result from increasing the amount and intensity of an activity too rapidly. If the activity that causes the stress fracture is resumed too quickly, larger, harder to heal fractures can develop and re-injury can lead to chronic problems.

Thirty percent of stress fractures occur in women, even though women today comprise only 14 percent of active duty military. Consider how common and costly the problem is. Studies have found from 10 to 14 percent of female cadets, officers, and recruits suffer stress fractures within 10 weeks. Stress fractures among 2,000 female recruits cost more than 4,000 training days and an average of 8 or more weeks to heal. Stress fractures of the femur and the pelvis can take even longer.

There are approximately 200,000 women on active duty in the U.S. Army, an additional 150,000 in the reserves, and nearly 25,000 female recruits. Stress fractures thus may afflict at least 40,000 female military. But they are not limited to women, as you know. There is one study that shows that nearly 5 percent of marine male recruits suffer them as well, and the military trains nearly 180,000 male recruits every year.

Why are women at greater risk? Basic training subjects recruits to extensive physical conditioning over a relatively short period of time. The resultant stress on the less physically fit, both male and female, increases the likelihood of injury. A family history of osteoporosis also increases the risk for females.

According to the Institute of Medicine (IOM), stress fractures increase the length of training, the cost of the program, and the time to military readiness. These injuries also lead sufferers to end their military careers prematurely. One study of female marine recruits demonstrated that nearly four times as many recruits with stress

fractures were separated from the Marine Corps as uninjured recruits.

Here are some quick highlights of bone research findings by the Department of Defense. We have discovered that the run time in habitual physical activity predict high-risk subjects. Those individuals suffered three times as many stress fractures. DOD researchers investigated whether a 1-week rest period early in training might prevent fractures. Unfortunately, the answer is it is not so easy.

However, ongoing research offers promise in exercise, nutrition, and pharmacological treatment strategies to prevent stress fractures. Current research includes studies to determine if electric field stimulation would enhance bone stress fracture recovery, identify gait patterns, that is how we walk and run, and whether there are particular ones associated with stress fractures, determine if a protein-based supplement could help increase bone mass in physically active recruits. Other studies have already indicated that protein is very important in bone strength in the elderly.

There are also studies to assess the relative predictive importance of the bone masses measured at the hip, spine, and tibia, of diet, including calcium, as well as the impact of menstrual function. We know from other studies that anorexia, which leads to amenhorrea, lack of menstrual periods, is associated with osteoporosis. We are also looking to see whether low-dose estrogen might prevent or slow bone loss in high-risk young females.

These studies, along with others in progress, will determine the most cost-effective approach to diagnosing and treating stress fractures to accelerate the return to duty. An improved understanding will form the basis for preventive measures for military men and women and the rest of us, for we are all at risk. The current program is on the cusp of significant breakthroughs in our understanding of the effect of physical forces on the bone. This too is vitally important to understanding bone disease process and prevention.

Senator STEVENS. Thank you very much, doctor. Thank you.

[The statement follows:]

PREPARED STATEMENT OF JOAN GOLDBERG

Mr. Chairman and Members of the Subcommittee: I am Joan Goldberg, Executive Director of the American Society for Bone and Mineral Research, a professional society of 3,500 researchers and physicians dedicated to promoting excellence in bone and mineral research and ensuring that clinical and basic science are translated into health care practice.

The National Coalition for Osteoporosis and Related Bone Diseases (the Bone Coalition) appreciates this opportunity to present our position on the need for sustained funding of the Department of Defense's research efforts on osteoporosis and related bone diseases. This is a small, but important, research program that directly affects military readiness. The Bone Coalition believes a funding level of $12 million will ensure the stability of this critical program in fiscal year 2002. The Bone Coalition also wishes to thank this subcommittee for its continuing support for this program.

The Bone Coalition is dedicated to educating the public and its elected officials about the need to promote lifelong bone health and the need for federal research funding to assist in reducing the widespread prevalence of osteoporosis and related bone diseases. The leading national bone disease organizations that comprise 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 Osteogenesis Imperfecta Foundation.

Together, we represent more than 485,500 individuals, while the diseases we address affect about 30 million Americans.

Bone diseases and associated fractures occur in all populations and at all ages. They are devastating diseases and disorders with significant physical, psychosocial and financial consequences.

Stress fracture has been identified by the Department of Defense (DOD) as a major problem for the military population. A report by the Institute of Medicine (IOM) noted the significant occurrence of stress fracture during basic training, with stress fractures accounting for a large proportion of time-loss injuries. Thirty percent of these injuries occur in women.

What is a stress fracture? Stress fracture is an overuse injury. It occurs when muscles become fatigued and are unable to absorb added shock. Eventually, the fatigued muscle transfers the overload of stress to the bone. This causes a tiny crack called a stress fracture. Stress fractures often are the result of increasing the amount or intensity of an activity too rapidly. If the activity that caused the stress fracture is resumed too quickly, larger, harder-to-heal stress fractures can develop. Reinjury also could lead to chronic problems where the stress fracture might never heal properly.

Recognizing the severity and magnitude of the problem within its population, the Department of Defense commissioned the Institute of Medicine to examine the incidence of stress fractures in military basic training. In particular, the IOM was asked to address why the incidence of stress fractures in military basic training was greater for women than for men.

The greater incidence of stress fractures in military women appears to be due in part to the ability of bone to withstand the sudden large increase in physical loading. Basic training subjects recruits to extensive physical conditioning over a relatively short period of time to bring them to the fitness level required to meet standards. The resultant stress on the less physically fit, both male and female, increases the likelihood of injury. A family history of osteoporosis increases the risk for female recruits.

According to the IOM, the incidence of stress fractures has a marked impact on the health of service personnel and imposes a significant financial burden on the military by delaying the training of new recruits. Also stress fractures increase the length of training time, program costs, and time to military readiness. These injuries may also lead sufferers to end their military careers prematurely.

The IOM study noted that stress fractures among 2,000 female Marine recruits resulted in 4,120 lost training days. The fractures required an average of eight or more weeks to heal.

When we consider that approximately 200,000 women are currently serving on active duty in the U.S. Armed Forces, and an additional 150,000 are serving in the Reserves, the impact of stress fractures takes on gigantic proportions. More than 14 percent of female cadets at the U.S. Military Academy alone developed stress fractures. However, stress fractures are not limited to women. The IOM report also pointed to 3.7 percent of male cadets at the U.S. Military Academy who developed stress fractures. The need to address the problem intensifies.

The Bone Coalition applauds the DOD for the research it supports aimed at improving the bone health of recruits. Research currently in progress includes studies to:

—determine if electric field stimulation enhances tibia stress fracture recovery. The tibia is the bone most frequently involved in stress fractures in military recruits. The prolonged time to healing (approximately 3 months), which requires rest from weight-bearing activity, adds up to a significant impact on military readiness.

—identify gait patterns associated with stress fracture risk. The identification of biomechanical or body movement factors associated with stress fracture may lead to the development of preventive measures. How one runs is known to be associated with injury risk. During running, the body experiences vertical forces of nearly three times one's body weight.

—determine if a protein-based supplement food bar can promote an increase in bone mass in physically active young military trainees. One study tests the hypothesis that nutrients other than calcium are critical to achieving peak bone mass. If a measurable benefit can be demonstrated through the use of a nutrient supplement, this could be of immediate use in military dietary strategies.

—assess the relative importance of bone mass at the hip, spine, and tibia, and diet including calcium. For female cadets in this four year study of the epidemiology of stress fractures in cadets in the class of 2002 at the U.S. Military Academy (West Point), the importance of menstrual function on bone mass will also be assessed.

—determine if low dose estrogen oral contraceptives can prevent or slow bone loss and decrease stress fractures in high risk females.

These studies, along with other DOD studies in progress, will determine the most cost-effective approach to diagnosis and treatment of stress fracture to accelerate the return to duty. An improved understanding of these injuries will also form the basis of potential preventive measures.

Mr. Chairman, a budget of $12 million in fiscal year 2002 will ensure the stability of the DOD osteoporosis and related bone diseases program and further its findings, which are critical to military readiness and recruit health.

Thank you for this opportunity to testify before the Committee.

Senator STEVENS. Joe Barnes. I am sorry. We are on 10-minute votes. Senator Inouye is over voting now, but I have to be over there before the 10 minutes is over.

Mr. Barnes.

STATEMENT OF JOE BARNES, DIRECTOR OF LEGISLATIVE PROGRAMS, FLEET RESERVE ASSOCIATION

Mr. BARNES. Mr. Chairman, on behalf of the more than 150,000 shipmates who serve in or who have retired from the Navy, Marine Corps, and Coast Guard, I extend gratitude for the concern and active interest of this subcommittee in providing funds for our Nation's defense. The Fleet Reserve Association also salutes you, the members and staff for the outstanding efforts in the 106th Congress that brought about significant health program and quality of life enhancements. They are very much appreciated by the enlisted personnel that Fleet Reserve Association (FRA) represents.

The association calls upon the Congress to continue its strong commitment and support for our men and women in uniform. Many important programs have long been ignored due to inadequate budget requests and demanding operational requirements. These negatively impact recruiting and retention, troop morale, and readiness. Recruiting and retention are primary concerns for the services and for FRA, due in part to inadequate pay and benefits to compete with compensation packages offered by civilian employers.

With regard to the promised extra billion dollars for pay, FRA strongly recommends that Congress adopt an across the board increase of one-half to 1 percent in basic pay for all hands and target the balance to fund higher basic pay for enlisted grades E–5 through E–9. This recommendation is in addition to the 4.6 percent basic pay increase proposed for January 1st, 2002.

Reenlistment decisions are also impacted by access to the military health system. As the primary health care program for active duty members and their families and an integral part of their retirement package, the system has been chronically underfunded. The system has become reliant on emergency supplemental appropriations or the reprogramming of funds within DOD to ensure the availability of services. Supplemental appropriations have been proposed for the current fiscal year and FRA strongly supports this initiative.

Another facet of the retention challenge is DOD's permanent change of station process. In contrast to Federal civilian employees, service members are being shortchanged for similar demands to relocate for duty assignments. In the event the oversight committee adopts the new plan, FRA requests the subcommittee to seek adequate funding for its implementation. Likewise, if authorized, FRA

asks for your support for funding the concurrent receipt of both military retired pay and VA disability compensation without offset.

Reform of the survivor benefit program is also needed to increase the basic annuity for surviving spouses, whose benefits are reduced when they become eligible for social security.

These quality of life improvements will further enhance DOD's pay and benefit package and enable the services to better compete for highly skilled and dedicated personnel.

Mr. Chairman, allow me to again express the sincere appreciation of the association's membership for all the subcommittee does for our military personnel. FRA is most grateful for this opportunity to express these concerns. Thank you.

Senator STEVENS. Thank you very much, Mr. Barnes.

[The statement follows:]

PREPARED STATEMENT OF JOE BARNES

INTRODUCTION

Mr. Chairman. On behalf of its membership and the men and women of the Sea Services whom it represents, the Fleet Reserve Association (FRA) gratefully acknowledges the significant contributions this Subcommittee has made to quality-of-life programs for the personnel of the Uniformed Services. The Association salutes you, the members and staff, for a job well done throughout the many years the FRA has been associated with your distinguished Subcommittee.

Fiscal year 2001 proved a banner year for military personnel legislation. Congress adopted new and improved military health care policies; TRICARE-for-Life and expanded pharmaceutical benefits. Additionally, to name but a few of the other major accomplishments; a sizeable basic pay increase, housing allowance reform, pay reform for mid-grade noncommissioned and petty officers, enhancement of the Montgomery GI Bill (MGIB), modification of the Impact Aid program, and increased compensation programs to financially assist junior enlisted personnel.

The successful adoption and enactment of these and other programs in the fiscal year 2000 and fiscal year 2001 National Defense Appropriations and Authorization Acts can be attributed to the persistence and effectiveness of this Subcommittee, its members and staff. The legislation adopted by Congress in the previous two years will go far to augment the stability and readiness of the All Volunteer Force (AVF) which, in turn, lends greater credence that the AVF is the most reliable source for the defense of the United States and its Allies.

FRA: LOYALTY, PROTECTION, AND SERVICE

The role of FRA, the oldest and largest enlisted military service organization, has been constant for more than three-quarters of a century. It has been and continues to be the ombudsman for all enlisted men and women of the three Sea Services—the U.S. Navy, Marine Corps, and Coast Guard. The membership, 150,000 strong, consists of enlisted personnel serving on active duty, in the Naval, Marine Corps and Coast Guard Reserve, or retired after honorably serving the Nation in war and peace. Many of the latter are combat veterans having served in one, two or three major conflicts involving the United States.

Noteworthy, is the Association's lead among all military and veterans' organizations in initiating and campaigning for legislation beneficial to quality-of-life projects that enhance recruiting and retention. Among its major successes are the Civilian Health and Medical Program for the Uniformed Services (CHAMPUS), now TRICARE, the uniformed services Survivor Benefit Plan (SBP), and in the past three years, repeal of REDUX (the onerous 1986 military retirement system) and Pay Reform for mid-grade noncommissioned and petty officers.

THE DEFENSE BUDGET

Mr. Chairman. The Constitution of the United States begins with "We, the People of the United States, in order to form a more perfect union, establish justice, insure domestic tranquility, provide for the common defense, promote the general welfare, and secure the blessings of liberty to ourselves and our posterity, do ordain and establish this Constitution for the United States of America." The words provide for

the common defense are emphasized because they proceed the words, "promote the general welfare."

In 1900, for example, the federal budget outlay (based on 1999 dollars) was $10.5 billion of which $4 billion (38 percent) was earmarked for defense expenditures. In 1999, the federal outlays were $1.7 trillion with $268 billion (16 percent) for defense. In the past eight years the defense budget has dropped from 19.3 percent of the federal budget to an estimated low of 15.9 percent in 2001. Under this scenario, FRA believes it has the duty to alert the Congress that increased authorization and funding for the programs necessary to maintain the highest degree in personnel readiness are priorities for fiscal year 2002. Should the Administration follow through with its statement of no significant increase in the fiscal year 2002 Clinton Defense Budget (in addition to the $3.7 billion for military health care, pay raises, and a boost in housing allowances) the Congress must enhance both authorization and funding to cover improvements in other quality-of-life projects. The current Administration may need additional time to develop a budget based on future strategic necessities, but time is not required to realize the immediate funding needs for repair parts, housing, modernizing infrastructures, and other programs that remain constant regardless of the strategic scenario.

CONCERNS

It would appear the successes recorded in the 106th Congress would be more than adequate to forego further requests for improvements in uniformed personnel programs. However, the need exists to continue the march for quality of life enhancements for our men and women in the Armed Forces, as well as those who have retired from the uniformed services after serving the required number of years on active or reserve duty. Many programs have been long ignored due to inadequate budget requests from previous Administrations. Slim budgets have played havoc with troop morale and readiness; too many operational demands on manpower, reduced or canceled training exercises and sessions, shortages of equipment and repair parts, inadequate housing and working facilities—plus the stress of juggling the demands of the Service with that of family life.

SUSTAINING THE ALL VOLUNTEER FORCE

The recently published draft report, Road Map for National Security, released January 31, 2001, by The United States Commission on National Security/21st Century, calls upon the Nation to "strengthen government (civil and military) personnel systems in order to improve recruitment, retention, and effectiveness at all levels."

It further attests to the Services' difficulties in recruiting and retention. To give the military Services "the flexibility to adapt and dramatically reshape their personnel systems to meet 21st century mission needs," the report calls upon the President and the Congress to propose and adopt legislation that will enhance both military compensation and the retirement system.

FRA agrees with the Commission's views on recruiting and retention. Without attaining goals in these two categories, there would be no All Volunteer Force (AVF). Although FRA soundly believes military service for all physically-abled young men should be mandatory, it continues to support the AVF—provided the taxpayers are willing to spend the money to maintain its structure.

The recruiting and retention scene has dramatically changed over the last 30 years. Taxpayers are paying as much as a $20,000 bonus, plus an educational benefit worth $50,000, to access one individual into the Armed Services. Taxpayers also pay more money to enlist married persons, with or without children, persons with families, or single parents with child(ren). Apparently, this is now a necessity or the AVF cannot attain its manpower objectives through accessing only unmarried and unencumbered males and females. Members of this group are not swarming into recruiting stations demanding to enlist.

According to the 1998 Youth Attitude Tracking Study (YATS), the propensity of young males to enlist in the military has dropped to 26 percent compared to 34 percent in 1991. The percentage of youth going to college is increasing and those going to college express little interest in serving in uniform.

In its list of priorities for fiscal year 2001, FRA is recommending to the Congress that during the authorization and funding process it consider adopting the following: (1) further pay reform to include all enlisted grades from E–5 through E–9; (2) adequately fund the Department of Defense's Health Care Program to include enhancements adopted in the Fiscal Year 2001 Floyd D. Spence National Defense Authorization Act; (3) improve the permanent change of station (PCS) process; (4) increase the size of the military manpower pool (or reduce deployments to "fit" the size of DOD's current uniformed strength); (5) adequately support Reserve component re-

quirements, and; (6) enhance other quality-of-life programs including reform of the uniformed services Survivor Benefit Plan, authorizing full concurrent receipt of retired pay and disability compensation, reforming sea pay, enacting equity amendments to the Uniformed Services Former Spouses Protection Act (USFSPA), and enhancing GI Bill benefits.

PAY REFORM FOR CAREER ENLISTED GRADES

The Association's membership, along with shipmates from the Navy, Marine Corps and Coast Guard, are extremely grateful to Congress for adopting the FRA Pay Reform package for mid-grade noncommissioned and petty officers (NCO) effective July 1, 2001. The reform came a year late, but the value of the delay prompted Congress to direct DOD to take another look at enlisted pay rates for the NCO corps.

The 9th Quadrennial Review of Military Compensation (QRMC) has made a commitment to review NCO basic pay by reconsidering the enhanced value of the NCO corps to the Armed Services. Their increased educational level and advanced technical knowledge command high wages in the civilian market.

FRA welcomes the attention given to NCO basic pay. The All Volunteer Force (AVF) that provided young enlisted members with higher basic pays, improved housing allowances, inflated enlistment bonuses, enhanced Cold War educational entitlements, and special pays (to name a few) is producing pay inversion—junior enlisted personnel are earning more pay than their senior NCOs/petty officers.

Congress has approved the use of more tax dollars to ensure junior service members receive extra pays (i.e. additional allowance for housing and to remove them from dependency on food stamps), yet this group normally will be promoted 3 to 4 additional pay grades in two to three years with a 43 percent to 55 percent increase in basic pay. On the other hand, a senior noncommissioned officer in pay grade E–9 can manage but a 30 percent increase in basic pay over a 16-year period.

This is the year to fix the pay inversion that engulfs NCOs and causes many of our mid-level noncommissioned and petty officers to bail out of the military in their 10th to 15th years of service. It's not just the lure of higher wages in the civilian world, it's looking forward to a bleak future in the Armed Forces that promises compressed pays at the senior enlisted level (E–8 and E–9) and a lack of recognition and appreciation for their roles as leaders and teachers.

Many of these bright and intelligent young people should aspire to attaining the grade of E–8 or E–9 instead of opting for a warrant or commissioned officer spot where the money can be a factor. Reviewing the current military retirement program finds the average enlisted military retiree in pay grade E–7, the average officer in pay grade O–5. The E–7's annual retirement pay as of January 1, 2001 will be $16,552 for 20 years of service. For the O–5, $34,741, or more than twice the pay of the retired E–7. Even an O–3's retirement pay at 20 years will be $25,752, more than a 50 percent increase over that of the E–7.

Who can blame these young people with 10 to 15 years of enlisted service to opt for the life of a commissioned officer. The financial lure is greater—greater than the retirement pay of an E–7, E–8, or E–9. Yet, there is a pressing need for the services to retain senior NCOs and Petty Officers to guide, lead, teach, train, counsel, and inspire their junior charges.

The Armed Forces cannot endure with only an officers' corps and a junior enlisted force. Few young people would seek a commission if it required them to have the experience to perform the same tasks now accomplished by the NCO corps. There must be an intermediate corps in the Armed Forces of dedicated men and women, conditioned and experienced by years of service, capable of enforcing the commands of the officers charged with planning and directing the unit's mission.

NCOs and petty officers do much more than carry out the orders of their officers. They also teach, train and counsel young men and women entering the officer ranks, replace officers in positions of command and, when called upon, change their stripes for bars during national emergencies.

The Association opposes utilizing the additional $1 billion promised for pay increases to fund bonuses and special pays. FRA recommends that Congress adopt a lesser across-the-board increase in basic pay for all hands (perhaps one-half to 1 percent) and target the balance to fund higher basic pay rates for the E–5 to E–9 enlisted grades.

This recommendation is in addition to the higher than the ECI 4.6 percent basic pay increase proposed for January 1, 2002.

HEALTH CARE FUNDING

FRA appreciates the significant military health care enhancements enacted in fiscal year 2001 and recommends that the Congress reiterate its commitment to authorize and appropriate sufficient funds for these improvements within the Department of Defense (DOD) Health Program (DHP). And further, to direct the Health Care Finance Administration (HCFA) to reimburse DOD for its care of Medicare-eligible military families at Military Treatment Facilities (MTFs), and expand the option of participating in the Federal Employees Health Benefit Plan (FEHBP) to military beneficiaries who are unable to find TRICARE providers for care, because of the absence of Medicare Part B, or because they are under age 65 and do not have the option to enroll in TRICARE Prime.

The Military Health System (MHS) is chronically underfunded, resulting in execution shortfalls, lack of adequate equipment capitalization, failure to invest in infrastructure and slow reimbursement to Managed Care Support contractors. For a number of years, the MHS has been forced to rely on emergency supplemental appropriations or the reprogramming of funds within DOD.

The military's health care program is one of the most important of all benefits afforded the men and women who serve in or have retired from the Uniformed Services, plus their families and survivors. The promise of "free" lifetime care in military treatment facilities (MTFs) was a major selling point in the military's recruiter's and career counselor's pitch to enlist or retain personnel in the Uniformed Services. Other than travel, adventure, and a 20-year retirement, what else was there to entice our service members to remain in uniform?

FRA is also represented by a more detailed statement in The Military Coalition's statement on additional health care issues and invites members of the distinguished Subcommittee to peruse that for additional information on this important issue.

IMPROVE THE PERMANENT CHANGE OF STATION PROCESS

The FRA is very concerned that service members continue to incur significant out-of-pocket expenses in conjunction with government-directed relocation orders.

A survey conducted by FRA via the Association's web site last fall, revealed that out of pocket expenses for military personnel averaged $2,270 across all pay grades. In addition, the 1999 Calibre Associates Study commissioned by DOD revealed that junior enlisted personnel indicated that providing a list of entitlements with permanent change of station (PCS) orders was their most desired change to existing policy. Due in part to confusion and misunderstanding of the entire process, junior enlisted personnel had a lesser proportion of their authorized expenses (27 percent) reimbursed by the government compared to the median (62 percent) of all other study respondents.

In contrast to federal civilians, service members are being shortchanged. Federal civilians receive substantial reimbursements in conjunction with government directed moves, up to and including reimbursement for house-hunting trips and homeowner closing costs. In the words of an FRA member, "I am a civil servant with a DOD agency and a Naval Reservist who has PCSed as a civilian. These (DOD) officials had every penny of their relocation expense reimbursed—by contrast the military PCSer has a very limited scheme of reimbursement. The answer to this, as it is to so many federal reimbursement systems, is simple. Just use the same reimbursement formula for the military member as applies to members of the senior civil service." FRA concurs.

Although the services are now authorized to provide advance temporary subsistence expenses and per diem to service members on duty outside the Unitede States, in Hawaii or Alaska, the PCS mileage allowances and per diem rates have not been adjusted since 1986. The Association applauds and strongly supports the expanded household goods demonstration projects which have the potential for significantly improving the quality of service and reducing the administrative requirements associated with claims and other procedures.

While fully understanding that the Subcommittee is not responsible for authorizing further enhancements to PCS programs, the Association asks for your support of improvements that may be included in fiscal year 2002 authorizing legislation.

UNIFORMED MANPOWER STRENGTHS

FRA continues to be concerned over the strength of the Nation's uniformed manpower, particularly that of the Navy, Marine Corps, and Coast Guard. There's far too much rhetoric regarding the adequate number of uniformed personnel; it's either too many or too few. FRA subscribes to the latter view—there aren't sufficient numbers of personnel to sustain the number of world-wide operations and training com-

mitments. Sea Service members, as well as those in the Army and Air Force, are unduly stressed because there isn't sufficient manpower available to meet mission requirements. Optempo is such that it impacts heavily on perstempo resulting in a serious negative effect on readiness.

FRA concedes that accessing greater numbers of recruits for the Armed Forces will be an extreme challenge to the Services recruiting force. Most of the Armed Forces have bolstered their recruiter ranks substantially along with associated budgets for advertising, enlistment bonuses and other costs. If an individual Service must attract increased numbers of qualified personnel, the Congress should provide adequate resources to attain that goal.

Most importantly is the threat that certain "defense experts" will recommend further reductions in the active forces in favor of increasing Reserve units. Although the Reserves have served magnificently in war and peace, the Nation should remember the Korean conflict. In WW I and WW II, the Vietnam and Desert Storm, the United States had some time to train its uniformed personnel before committing them to combat. For the Korean conflict, the United States had a small regular force, mostly untrained, to send into battle. The United States was outnumbered, outmaneuvered and slaughtered before the Reserves could be mobilized and committed to battle. When the Congress considers Reserve strengths, which FRA believes should be increased, it must remember the "Forgotten War"—Korea—and augment the active forces as recommended by Service chiefs.

RESERVE COMPONENT GOALS

The Reserve components of the Navy, Marine Corps, and Coast Guard are an important part of the Total Force concept and essential to sustaining the high state of readiness of the Nation's Armed Forces. Reservists have carried the brunt of defending the United States against all enemies. As the old saying goes, there are more names of Reservists on the headstones in our wartime cemeteries than members of the regular force. FRA salutes its Reservists' members and seeks authorization and funding from the Congress for the following:

—Adoption of a permanent policy authorizing six years of Selected Reserve service to qualify for retirement.
—Authorizing employer and reservist tax credit for unreimbursable expenses.
—Extension of the ten year limitation for selected reservists to use their MGIB benefits.
—Deferring repayment of certain federal student loans for activated reservists.
—Increasing medical coverage for reservists who become ill while performing inactive duty for training.
—Extending the VA Home Loan Guarantees for selected reservists.

OTHER QUALITY-OF-LIFE ISSUES

Survivor Benefit Plan

FRA supports and recommends the adoption and funding of Sen. Strom Thurmond's S. 145, to amend title 10, United States Code, to increase to parity with other surviving spouses the basic annuity that is provided under the Uniformed Services Survivor Benefit Plan for surviving spouses who are at least 62 years of age. Further, to adopt and fund a proposal to amend the date now established in law authorizing paid up SBP premiums for statutory-eligible participants from October 1, 2008 to October 1, 2002.

Currently, the plan falls short of what is offered our retired Federal civilian counterparts once employed by the DOD. Under the Federal Employees Retirement System (FERS) they receive a subsidy of 42 percent, and under Civil Service Retirement System (CSRS) 50 percent. Uniformed Service members, on the average, pay less than retired DOD civilian employees but pay into the plan over a longer period (e.g. 36 years compared to 19) for the retired DOD employee. Members' surviving spouses also receive less of a gain than CSRS and FERS surviving spouses although payments to the former are made over a longer period.

Some Congressional sources state there is a conflict as to whether the original intent of the SBP was to have the Federal Government subsidize 40 percent of its costs. They claim there is nothing to support the existence of that subsidy. But there is such a base. The then Assistant Secretary of Defense for Force Management Policy forwarded a report on the Survivor Benefit Plan on July 18, 1996, to the Chairman of the Committee on National Security. The report on page ES–18 emphasized that the original intent was to provide a subsidy of 40 percent, that it was then about 28 percent, and that a selection of recommended options in the report should be selected to raise the subsidy to approximately 40 percent.

If the Federal Government provided its 40 percent share over the past years, there would be sufficient funding in the participants' contributions to authorize and appropriate funds (approximately $3 billion over a ten-year period) to enact the changes requested above.

Concurrent Receipt

FRA urges Congress to adopt and fund S. 170, sponsored by your colleague, Sen. Harry Reid,, that would authorize nondisabled retired members of the Armed Forces who later become eligible for service-connected disability payments to receive both full military retired pay reason of years of military service, and compensation payments from the Department of Veterans Affairs. The enactment of this proposal would halt the discriminate practice of denying retired military personnel concurrent receipt while authorizing such for retired civilian employees of the DOD and other Federal agencies.

Opponents claim that two Federal payments should not be authorized for the same period of service; however, certain Federal employees receive two payments from the U.S. Treasury for their employment while concurrently receiving pay for active duty for training in the Reserve components of the Armed Forces. FRA believes it can say without a doubt that this is two Federal payments for the same period of time.

Former Spouses Protection Act (FSPA)

The Uniformed Services FSPA, Public Law 97–252, is probably the most ambiguous, misunderstood, inequitable, and prejudiced law ever forced on retired members of the Uniformed Services. It is not that the majority of retired military members wish to not share their military retirement pay with ex-spouses, but the fact that family courts appear to use the Act to penalize many military retirees and as a means to force payment of divorce settlements through the United States Government.

State courts almost automatically award ex-spouses percentages of the respective members' retirement pay ordering the DOD to directly pay the courts' awards to the ex-spouse or an appropriate state agency. However, without full assurance, the courts have jurisdiction over the members concerned. Whereas the language of the Act states the courts "may" treat military retirement pay as property, the majority of courts interpret the word as "will" or "shall." Further, should a state court ignore provisions of law in the USFSPA or a decision made by the United States Supreme Court, there is no available means within the United States Judiciary to assist the member in forcing the offending state court to amend its unlawful ruling.

There are many inequities in this law, heavily weighted against the retired military member. Congress must face the unpleasant task of reforming the Act so that it is as fair to the retired member as to his or her ex-spouse. FRA, as well as many other military and veterans organizations, representing millions of members, will be pleased to support the Congress in amending the Act. True, USFSPA has been amended 11 times in favor of the ex-spouse and only once for military retirees. FRA recommends that no such further amendments be adopted without considering favorable and equitable changes for military retirees.

Sea Pay

FRA urges the Congress to authorize and appropriate funding increases in Career Sea Pay. And additionally, to authorize and fund sea pay for junior enlisted sailors in the grades of E–1 through E–3. In 1995, one of the Association's legislative staff members participated as a member of the Defense Science Board Quality of Life Panel. In visits to Naval installations and ships, recurring comments were heard from both ships' officers and senior enlisted chiefs about the importance of providing sea pay, or its equivalent, to junior enlisted sailors. These young sailors go to sea the same as the career force and perform the essential but unglamourous jobs on ships. Additionally, in many cases they are required to live aboard the ships when in dock for repairs where the noise is deafening—resulting in no rest, no sleep, and no peace of mind.

GI Bill

Educational benefits are the most attractive Armed Forces recruiting incentive and, despite improvements made in fiscal year 2001 to the Montgomery GI Bill (MGIB), further program enhancements are needed. With the Services experiencing continuing difficulties in recruiting quality personnel, it is almost imperative that the Congress increase the Bill's appeal to the Nation's eligible youth.

However, enhancement should not be so attractive that the first term service member opts to leave the military to take advantage of an improved MGIB. Additional benefits should be predicated on the service member's further retention. First-

termers who reenlist for four or more years would be offered additional benefits. For those remaining in uniform for longer periods of service, greater entitlements would be available. If the service member serves 20 years or more for retirement purposes, only the member performing such service would be so authorized an even greater benefit package or choose the option of transferring the entitlement to a member of the immediate family.

Additionally, FRA recommends that the MGIB be opened to enrollment of qualified members on active or Reserve duty who have not previously enrolled or disenrolled provided they reenlist for a term of no less than three years. The costs of these improvements may be high, but the benefits will be even higher. Better yet, the All Volunteer Force will survive.

Other Goals

In addition to FRA's primary goals, there are others issues listed below that have been adopted by the Association's members in assembly at its 2000 National Convention. To adopt:

—Adequate funding as required by law for Basic Allowances for Housing.
—Expansion of the number of family housing and barracks to replace aging and substandard units.
—Adequate funding for commissary stores to preserve current benefits.
—Continuation of augmenting Impact Aid appropriations to ensure adequate funding to military-impacted schools.
—Support the continuation of the Relocation and Transition Assistance Programs.
—Abbreviated military treatment facilities (MTFs), commissary stores and exchanges at military installations ordered to close where there is a sizeable military patronage of active, Reserve, and/or retired service members.
—Adequate funding to provide for the procurement of necessary equipment and essential spare parts.

Mr. Chairman. There are other goals not listed herein; goals that need to be resolved for the benefit of the men and women serving in the Uniformed Services. They do not, however, concern the programs and issues assigned to this distinguished Subcommittee. FRA will make them known to the appropriate panels with a request that the members of this Subcommittee actively support their adoption if brought to the House floor for consideration. The latter includes the need to escalate the modernization and construction of living, working, and recreational facilities on board ships as well as on land—issues FRA is addressing in testimony to the Subcommittee on Military Construction Appropriations.

Meanwhile, FRA extends its appreciation for the opportunity to present its goals for fiscal year 2002, to seek your support for the issues presented, and to wish the Subcommittee the very best in its deliberations on dividing the budget to fund the programs of importance to our uniformed personnel.

Senator STEVENS. I will vote and the next witness will be Ms. Hinestrosa.

Senator INOUYE [presiding]. The chair calls upon Maria Carolina Hinestrosa, Board member of the National Breast Cancer Coalition.

STATEMENT OF MARIA CAROLINA HINESTROSA, BOARD MEMBER, NATIONAL BREAST CANCER COALITION

Ms. HINESTROSA. Thank you very much, Mr. Chairman and members of the committee, for your exceptional leadership in the effort to increase and improve breast cancer research. As my testimony will describe in detail, the investment and cancer research made by you in this committee has brought us closer than ever to the verge of significant discoveries about cancer.

I am Carolina Hinestrosa, founder of Nueva Vida and member of the Board of Directors of the National Breast Cancer Coalition (NBCC). I am also a two-time breast cancer survivor and a consumer advocate in the Department of Defense Breast Cancer Research Program Integration Panel, and we do programmatic review.

As you know, the National Breast Cancer Coalition is a grassroots advocacy organization made up of more than 600 organizations and tens of thousands of individuals and has been working since 1991 toward the eradication of this disease through advocacy and action. As a member of the integration panel, I participate in the evaluation of all the proposals submitted to the DOD breast cancer research program. I also take part in the careful discussion that sets the vision for this unique program.

On behalf of the National Breast Cancer Coalition and the 2.6 million women now living with breast cancer, I thank you for your strong past support of the DOD breast cancer research program and urge your continued support of this important program with level funding for financial year 2002.

The National Breast Cancer Coalition believes this program is vital to the eradication of breast cancer. My written testimony, which I would like to submit for the record, has specific examples of scientific achievements resulting from funding through the DOD breast cancer research program. The main point I want to make today is that developments in the past few years have begun to offer breast cancer researchers crucial insights into the biology of breast cancer and have brought into sharp focus the areas of research that hold promise to build on the knowledge and the investment we have made.

Breakthroughs in basic research have opened the door for targeted approaches that address one woman's breast cancer in a different way from another woman's breast cancer. The DOD program has contributed immensely to the body of knowledge about this very complex disease in the areas of prevention, detection, androgenesis, vaccines, and clinical applications. But we still have a great deal more to learn.

Mr. Chairman and members of the committee, the investment that you have made in the program over the years is now beginning to pay off. This is not the time to step back from funding this unique and innovative research program. Rather, this is precisely the time to continue a focused, targeted program that looks specifically at breast cancer.

As a result of the DOD program, the amount of scientific information about breast cancer is exploding. We must continue this focus in order to build on this gained knowledge and on the discoveries that we have made. The DOD breast cancer research program has been an incredible model that others have replicated. The innovative research performed through the program has the potential to benefit not only breast cancer, but all cancers, as well as other diseases. Its success is literally changing the face of biomedical research in many areas.

An inherent part of this program has been the participation of consumer advocates at every level, which has created an unprecedented working relationship between advocates and scientists and ultimately led to promising research in breast cancer. 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 facts.

The program is also responsive to the public. All the research that has been funded through the DOD breast cancer research pro-

gram is reported to the public in a biannual conference called the Era of Hope Meeting. 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 have gone directly to research grants. 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, as we truly believe it is one of our best chances at finding a cure or a true 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 research to forge ahead. Level funding would allow the momentum to continue towards eliminating the enormous toll that breast cancer puts on American families.

NBCC asks you, the Defense Appropriations Subcommittee, to recognize the importance of what you have initiated. You have set in motion an innovative and highly efficient approach of fighting the breast cancer epidemic. You must continue to support this effort by funding research that will help us win this very real and devastating war against a cruel enemy.

Very shortly you will receive a letter that has been signed by more than 60 of your colleagues in support of the continuation of the breast cancer research program and funding at $175 million.

I want to thank you very much for inviting me to testify and giving hope to the 2.6 million women living with breast cancer in the United States. Thank you.

Senator STEVENS [presiding]. Thank you.

[The statement follows:]

PREPARED STATEMENT OF MARIA CAROLINA HINESTROSA

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 that has brought us closer than ever to the verge of significant discoveries about cancer. I am Carolina Hinestrosa, member of Programa Nueva Vida and member of the Board of Directors of the National Breast Cancer Coalition. I am also a breast cancer survivor, and a consumer advocate on the Department of Defense Breast Cancer Research Program Integration Panel, which does programmatic review.

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 2002. 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 more than 600 organizations and tens of thousands of individuals and has been working since 1991 toward the eradication of this disease through advocacy and action. NBCC supports 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.

OVERVIEW OF THE DOD BREAST CANCER RESEARCH PROGRAM

The DOD Peer-Reviewed Breast Cancer Research Program has been an incredible model that others have replicated. Broadly defined, the innovative research per-

formed 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.

UNIQUE FUNDING OPPORTUNITIES

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. Therefore, they complement, and do not duplicate, other federal funding 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.

SCIENTIFIC ACHIEVEMENTS

Following are just some of the achievements of the DOD BCRP which are included in DOD's Congressional Directed Medical Research Programs Annual Report (September 1999) sent to Congress. The DOD Peer-Reviewed Program has 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.

One of the most promising outcomes of research brought about by the BCRP was the development of Herceptin, a drug that prolongs the lives of women with a particularly aggressive type of advanced breast cancer. This drug could not have been developed without first researching and understanding the gene known as HER2-neu, which is involved in the progression of some breast cancers. In a DOD BCRP funded study, researchers found that over-expression of HER-2/neu in breast cancer cells results in very aggressive biologic behavior. Most importantly, the same researchers demonstrated that an antibody directed against HER2-neu could slow the growth of the cancer cells that over-expressed the gene. This research led to the development of the drug Herceptin. Other researchers funded by the BCRP are currently working to identify similar kinds of genes that are involved in the initiation and progression of cancer. They hope to develop new drugs like Herceptin that can fight the growth of breast cancer cells.

Several studies funded by the BCRP will examine the role of estrogen and estrogen signaling in breast cancer. For example, one study examined the effects of the

two main pathways that produce estrogen. Estrogen is often processed by one of two pathways; one yields biologically active substances while the other does not. It has been suggested that women who process estrogen via the biologically active pathway may be at a higher risk of breast cancer. It is anticipated that work from this funding effort will yield insights into the effects of estrogen processing on breast cancer risk in women with and without family histories of breast cancer.

One DOD Idea award success has supported the development of new technology that may be used to identify changes in DNA. This technology uses a dye to label DNA adducts, compounds that are important because they may play a role in initiating breast cancer. Early results from this technique are promising and may eventually result in a new marker/method to screen breast cancer specimens.

Another DOD BCRP Idea award has generated a new vaccine targeted against ductal carcinoma in situ (DCIS), a malignant, non-invasive lesion that can develop into an invasive breast cancer. The vaccine is being tested on mice that develop spontaneous mammary tumors that over express the HER-2/neu protein. Mice treated with the vaccine show a markedly decreased rate of tumor development when compared to that generated for the prevention of tumor formation in women at risk for the development of HER-2/neu expressing tumors.

Investigators funded by the DOD have developed a novel imaging technique that combines two-dimensional and novel three-dimensional digital mammographic images for analysis of breast calcifications. Compared to conventional film screen mammography, this technique has greater resolution. Ultimately, this technique may help reduce the number of unnecessary breast biopsies.

Despite the enormous successes and advancements in breast cancer research made through funding from the DOD BCRP, we still do not know what causes breast cancer, how to prevent it, or how to cure it. It is critical that innovative research through this unique program continues so that we can move forward toward eradicating this disease.

Research that has been funded through the DOD BCRP is available to the public. Individuals can go to the Department of Defense website and look at the abstracts for each proposal.

FEDERAL MONEY WELL SPENT

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 have gone directly to research grants. The overall structure of the system has streamlined the entire funding process, while retaining traditional quality assurance mechanisms.

Since inception of the DOD BCRP, more than 15,000 proposals have been received. For the fiscal year 2000 BCRP, 1,234 proposals in 14 different award mechanisms were received and 347 proposals have been recommended for funding.

A total of 1,772 one-page proposals for Concept Awards (a new type of grant for preliminary ideas that could not otherwise get funding) was received electronically as a result of a second fiscal year 1999 Program Announcement. The fiscal year 1999 appropriation funded 98 Concept Awards, and negotiations for 206 awards to be funded with the fiscal year 2000 appropriation have begun and should be completed by September 30, 2001.

As you know, Congress appropriated $175 million for the fiscal year 2001 BCRP. The fiscal year 2001 Program Announcement was this month. Following a two-tier review, all awards will be negotiated by September 2002.

The outcomes of the BCRP-funded research can be gauged, in part, by the number of resultant publications, abstracts/presentations, and patents/licensures reported by awardees, to date. There have been 2,300 publications in scientific journals, 1,800 abstracts and 30 patents/licensure applications.

The American people can truly be proud of their investment in the DOD BCRP.

POSITIVE FEEDBACK ON THE DOD BCRP

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 two public meetings called the "Era of Hope" (one in 1997, and one in 2000). These have been the only times that 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. These meetings 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.

At the first "Era of Hope" meeting in 1997, many scientists 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."

This enthusiasm was reiterated at the second Era of Hope meeting last 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.

COMMITMENT OF THE NATIONAL BREAST CANCER COALITION

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 called 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 was an essential component of reaching the $2.6 billion goal that so many women and families worked to gain.

Once again, NBCC is bringing its message to Congress. Just a few weeks ago, many of the women and family members who supported the campaign to gain the 2.6 million signatures participated in NBCC's 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 in, 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.

NBCC asks 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. Mr. Pearce, American Chemical Society, please.

STATEMENT OF ELI PEARCE, Ph.D., PRESIDENT-ELECT, AMERICAN CHEMICAL SOCIETY

Mr. PEARCE. Chairman Stevens and Senator Inouye, good morning and thank you for the opportunity to testify today. My name is Eli Pearce and I am President-elect of the American Chemical Society (ASC). A congressionally chartered organization, the American Chemical Society represents 163,000 chemical scientists and engineers.

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. As a professor of chemistry at Polytechnic University in Brooklyn, New York, I know first-hand the importance of DOD research. The society thanks the subcommittee for the substantial increases it provided for defense research in fiscal year 2001, which was an important step toward reversing the declines that the defense research programs experienced in the 1990's.

Mr. Chairman, the ACS urges the committee to increase the science and technology program 10 percent to $10 billion for fiscal year 2002. This is not an arbitrarily chosen target. In fact, it is consistent with the longstanding recommended level, reiterated this spring by the Department's own science board. A strong, steady investment in the science and technology program, especially in the 6.1 basic research account, will enable DOD to capitalize on synergies between new discoveries and developing technologies.

Currently DOD must decline almost as many highly rated grant proposals as it can fund. These are lost opportunities. We are delighted that President Bush has emphasized the need to make the long-term science and technology investments required to safeguard our national security, not just this year or next year, but 10 and 20 years down the line. As you know, the President proposes to increase defense Research and Development (R&D) programs by $20 billion over 5 years, including $2.6 billion in fiscal year 2002.

Although the administration has not specified which R&D accounts would receive increases, we strongly recommend that enough of this proposed increase be directed to the core science and technology research accounts to achieve the $10 billion funding target.

Mr. Chairman, I would now like to share an example with you of how fundamental scientific discoveries have helped the Department of Defense solve long-term challenges. This example comes from university researchers working with chemists at the Naval Research Laboratory, exploring ways to uncover plastic mines, which are difficult to detect with metal detectors. This work has led to a new way to detect explosives using nuclear quadrupole resonance (NQR). These life-saving devices, successfully tested by the Navy in 1999, have significant potential for increasing civilian airport security as well, making NQR an interesting example of dual use technology.

Examples such as these are what DOD's science and technology investments are all about, investing in those fundamental areas of research that have the highest potential for discoveries that can cut costs, save lives, and, above all, advance our national security. To stay several technological steps ahead of adversaries, we simply have no choice but to invest in cutting edge science today.

Thank you for your attention to this important matter. The American Chemical Society looks forward to assisting you in any way possible.

Senator STEVENS. Thank you very much.

[The statement follows:]

PREPARED STATEMENT OF ELI PEARCE

Chairman Stevens, Ranking Member Inouye, and Members of the Subcommittee: Good morning. My name is Eli Pearce, and I am President-Elect of the American Chemical Society. I am also a chemist professor at Polytechnic University in Brooklyn, New York. 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 more than 163,000 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.

Advances in science and engineering have produced more than half of our nation's economic growth in the last 50 years. They remain the most important factor in the productivity increases responsible for our growing economy and rising standard of living, economists agree. Each field of science contributes to our diversity of strengths and capabilities and has given us the flexibility to explore new fields and apply science in unexpected ways. The Society thanks this subcommittee for the substantial increases you provided for defense research last year, which was a substantial step towards reversing the declines the defense research programs experienced in the 1990's.

Mr. Chairman, the DOD program that our members are most concerned about is the Science and Technology (S&T) program. It 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. Specifically, ACS urges the Committee to increase DOD's S&T program 10 percent to $10 billion this year, up from its level of $9 billion in fiscal year 2001.

DOD's S&T program consists of 3 parts commonly known as the 6.1, 6.2, and 6.3 accounts. DOD's basic research, or 6.1 account, is critical to maintaining the technological edge that has been so central to our national security. DOD's basic research, 60 percent of which is conducted by our nation's universities, 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 and trains for the next generation of scientists and engineers in disciplines critical to our national security. Currently, DOD must decline almost as many highly-rated grant proposals as it can fund. These are lost opportunities for significant discoveries. Increases in core, peer-reviewed research in chemistry, materials, and other areas are essential to lay the foundation for leading-edge battlefield technology.

Research funded through the Applied Research (6.2) and Advanced Technology Development (6.3) accounts enable fundamental science discoveries to be integrated into new technologies and applications, some of which also may be useful in the civilian sector. A strong, steady investment in these three accounts, which make up the DOD S&T program, will enable DOD to capitalize on synergies between new discoveries and developing technologies.

We are delighted that President Bush has emphasized the need to make the long-term S&T investments needed to safeguard our national security—not just this year or next year, but 10 or 20 years down the line. As you know, Mr. Chairman, President Bush proposes to increase defense R&D programs by $20 billion over 5 years, including $2.6 billion in fiscal year 2002. Although the Administration did not specify which R&D accounts would receive increases, we strongly recommend that a sig-

nificant proportion be directed to the core S&T research accounts. This would help achieve the $10 billion funding level many groups are seeking for defense science and technology, which is in line with the levels recommended by the Department's own Science Board. In 1998, the Defense 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 reiterated this position in an updated report released just this month.

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 S&T investments are all about—investing in those fundamental areas of research that have the highest potential for advancing our national security.

Research investments being made today will result in discoveries that can cut costs and save lives. For example, Air Force researchers discovered ways to remove more than 95 percent of the nitrogen oxides and sulfur dioxide from the exhaust of jet and diesel engines. The new, highly effective exhaust systems help the Air Force filter tons of pollutants and avoid the fuel costs associated with carrying heavy pollution control equipment. In addition, university researchers and chemists at the Naval Research Laboratory are working on new ways to uncover plastic mines, which are difficult to detect with regular metal detectors. This work has led to a new way to detect explosives, using Nuclear Quadrupole Resonance (NQR). The basic science underlying NQR began back in the 1980's, and has relied on improvements in magnetic resonance imaging as well as the development of new materials. This potentially life-saving device, tested by the Navy in Bosnia in 1999, typifies the fundamental science necessary to serve unique national security needs. These examples are areas of scientific research that industry prefers to avoid because of the small financial returns associated.

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 judgment, we must avoid having future opportunities take a back seat. We must realize that a strong investment in the defense science and technology program, 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.

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.

Put most simply, we are asking the Subcommittee to keep a close eye on the long view of our national security. 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. The American Chemical Society looks forward to assisting you in any way possible.

Senator STEVENS. Mr. Spiegel, Reserve Officers Association.

STATEMENT OF JAYSON L. SPIEGEL, EXECUTIVE DIRECTOR, RESERVE OFFICERS ASSOCIATION OF THE UNITED STATES

Mr. SPIEGEL. Thank you, Mr. Chairman. On behalf of the Reserve Officers Association, we are grateful for the opportunity to present our views with respect to how the fiscal year 2002 budget may affect the Reserve components. We appreciate each of your strong support of the National Guard and reserves in the past and look forward to working with you in the future.

In the interests of brevity, let me focus on just a few issues, first being force structure. The Reserve components remain the best bargain in DOD, costing about 25 percent of the comparable active component soldier or unit. We are concerned that as the review process continues in the Pentagon there may well be efforts to further reduce the National Guard or Reserve in the interest of gener-

ating budgetary savings. We would submit that the Congress ought to approach any such recommendations with caution.

The Reserves have been deployed to a much greater extent than at any time in history. Reserve deployments are up 300 percent since 1990 even though the size of the Reserve force has gone down approximately 30 percent. Given that, we would submit that when you are in a hole you ought to start thinking about stopping digging and to look much more seriously at how best to structure DOD to capitalize on the individual skills that Reserve components bring from their civilian lives. Information technology, civil affairs, information warfare are the kinds of things that reservists have expertise in and, rather than cut those forces, we ought to think seriously about how best to grow them.

Of course, it takes approximately 7 years to reconstitute a reserve unit after it has been slated for deactivation. It is not a renewable resource.

Let me draw the committee's attention to a late-breaking development that may be of interest. Within the last 2 weeks, a national marketing firm has surveyed public attitudes towards the Reserve components and revealed that 94 percent of the American public find that the Reserves, quite correctly, play a significant role in defense policy, and two-thirds of the American public would not support further reductions in the Reserve components at this time in order to generate budgetary savings.

A copy of the poll results will be circulated to each Senate office this week. We think that once again the American people have it right, that the Guard and Reserve are a unique, cost-effective asset for executing national defense policy, but they need to be adequately resourced. So we would first ask that the committee not entertain any further reductions in the size of the Reserve components.

We also recognize that the cost of training is a serious issue and we would ask the committee to look seriously at the size of the full-time support provided to the Guard and Reserve, particularly on the Army side. The full-time support people who do the work day to day enable the Reserve units to train for their wartime skills on the weekend rather than performing administrative or maintenance functions, and we would ask that sufficient funding be provided for Active Guard, Reserve, Training and Administration of Reserves (TARS), Air Reserve Technicians (ARTS), Military Technicians (MILTECH's), the entire panoply of full-time support that the reserve components enjoy.

With respect to equipment, that has long been a problem in the reserve components, whether the equipment cascades from the active or is provided directly. The Guard and Reserve tend to get the least modernized equipment than the active component. We urge the committee to look very seriously at this issue. We strongly support continuation of the National Guard and Reserve equipment appropriation (NGREA). We recognize that the Pentagon pledged to provide adequate funding for Guard and Reserve equipment in their budget submit, thereby obviating the continued need for NGREA. History demonstrates the Pentagon has not done that and we would urge the committee to fund those unique Guard and Reserve equipment priorities if the Department does not do so.

Senator STEVENS. Thank you very much. We appreciate your recommendation.

[The statement follows:]

PREPARED STATEMENT OF JAYSON L. SPIEGEL

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 2002.

At the outset, I must preface my testimony with the observation that unlike previous years, at the moment we have no real details of what the Department of Defense budget request contains. Thus, our testimony must, of necessity, reflect requirements based upon last year's submission and anticipated programmatic needs. We will provide the committee with supplemental testimony and analysis at a later date that will have the benefit of greater detail.

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."

STUDIES AND ANALYSES

The results of recent force structure studies have proven disappointing as far as detailed recommendations regarding the Reserve components are concerned. Indeed, the detailed Reserve component recommendations were largely manifested as significant reductions to Reserve end strength underpinned by undue optimism. It remains to be seen what changes to the national defense strategy may be forthcoming as a result of the findings and recommendations of the National Security (Hart-Rudman) Commission, the new administration's initial Defense assessment, the National Defense Strategy, and the 2001 QDR. Evolutionary or revolutionary, these changes will ultimately hinge on affordability and the prudent acceptance of risk. Absent a fundamental shift in national priorities, increases in the defense share of the annual budget will be marginal at best.

Although earlier force structure reviews were described as being threat-based rather than budget-driven, common sense and experience says that both of these factors will play a large part in developing the final product in both cases. Ultimately the recommended solution will bear evidence of pressure from both sides of the equation. To achieve balance in the face of unyielding economic constraint, force structure will be modified and so, too, will the definition of the perceived threat.

Clearly, this is not the way to develop a national defense strategy for the next century; nevertheless, the actual product is more likely to resemble this model than not. What may be salutary in this process will be the necessity of modifying significantly the structure of the Total Force to integrate components and to eliminate as much as possible the current unnecessary redundancies that exist, both inter- and intra-service and component. However the structure is finally crystallized, one thing is virtually certain: our Reserve forces will play an increasingly significant role in it and its employment.

GREATER RELIANCE ON RESERVE COMPONENTS

The 50 years of reliance on a large, Cold War, standing military have 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 265,000 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 48,000 Reservists have again demonstrated their readiness and their capability to respond to their nation's call. For the past several years, the Reserve components have provided approximately 12.5 million support days to the Active components annually. That equates to some 35,000 support years annually, the equivalent of two Army divisions.

A strong, viable Reserve force is an inseparable part of America's military, a cost-effective augmentation to the Active force and the marrow of the mobilization base. Ultimately, mobilizing Reserve forces is the litmus test and the enabler of public support and national will. The early and extensive involvement of the Guard and Reserve in the Gulf War was instrumental in achieving the strong public support of the military and our national objectives.

RESERVE COMPONENTS' 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 38 percent of the Total Force, but cost only 7.5 percent ($23.4 billion) of the fiscal year 2002 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

The Army Reserve has played a major role in the Army's increased post-Cold War OPTEMPO. When the Army has deployed, so has its Army Reserve. The downsizing of America's Army and the Army's decision to transfer much of its combat service (CS) and combat service support (CSS) into the Reserve have required a much greater reliance by the Army on its Army Reserve. The Army can no longer go anywhere or sustain its operations once there without the support of its Reserve components. However, this increased reliance has not generated adequate funding in the Defense budget.

The expected fiscal year 2002 budget request, as have previous budgets, appears to critically underfund the Army Reserve personnel, operation and maintenance, and military construction accounts. These resourcing shortfalls will adversely affect readiness and training and ultimately the quality of life, the morale, and the retention of these highly motivated and patriotic citizen-soldiers.

The Army Reserve's expected share of the Army budget request in the fiscal year 2002 DOD budget request is $4.3 billion or 5.7 percent of the entire $75.5 billion Army request. Separated into the Reserve Personnel, Army (RPA) and the Operation and Maintenance, Army Reserve (OMAR) accounts, the request is for approximately $2.6 billion RPA and $1.7 billion OMAR. At those funding levels 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 is expected to exceed $300 million.

Reserve Personnel, Army

The fiscal year 2001 authorized end strength for the Army Reserve is 205,300. Reliance on the Guard and Reserve for involvement in real world operations and domestic contingencies increased considerably during the last decade. During this evolution of the Reserve from a break-glass-in-case-of-emergency-type operation to its current role as a full partner in the Army's real world operations, adequate resourcing to support readiness, training, manning and equipping of the Reserve to enable it to support the Army and our national military strategy has become critical.

The expected RPA budget request for $2.6 billion will not provide adequate funds to train, educate, man, and support Army Reserve personnel and units at levels required for immediate mobilization and deployment. Based on preliminary budget estimates we believe the fiscal year 2002 Defense budget request will critically

underfund the Army Reserve by over $150 million in several Reserve Personnel, Army accounts. For example:

Active Guard Reserve (AGR) Personnel

Active Guard Reserve (AGR) personnel give USAR 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. One of the greatest challenges facing the Army Reserve today is an insufficient number of full-time manning (FTM) authorizations to support the over 1,900 USAR units in day-to-day operations.

The Army Reserve has the lowest percentage of FTM of all the Reserve components and historically has been the component most frequently called and deployed. The shortage of FTM personnel constrains high priority units and causes personnel turbulence in lower priority units, as personnel are cross-leveled to fill higher priority units.

The Army has established an 11-year ramp of 300 AGRs each year beginning in fiscal year 2002 to increase the level of AGR FTM positions within the USAR. Projected fiscal year 2002 costs to support the fiscal year 2001 AGR increase and the fiscal year 2002 ramp is projected to be $23.5 million. The Army Reserve has a critical/executable-funding shortfall of $23.5 million in its AGR FTM program.

Incentives Program

The USAR has validated requirements for $147 million to support its fiscal year 2002 incentives programs. Expected funding for the program based on the September 2000 Best Estimate (BES) is $115 million leaving a critical shortage of $32 million. Any shortfall will put at risk initial payments for non-prior service, prior service, reenlistment, and health professional recruiting and retention bonuses; its health professional loan repayment program; the Montgomery GI Bill Kicker; and College First. Recent congressional actions to enhance incentives have increased the non-prior service bonus from $5,000 to $8,000, the health professional loan repayment from $20,000 to $50,000, and the reenlistment window from 10 to 14 years. We believe the Army Reserve will have a critical executable funding shortfall of $32 million in its incentives program.

Fiscal Year 2002 Individual Duty Training (IDT) Shortfall

The fiscal year 2002 validated requirement to fund the 48 statutory IDT drills for Army Reserve unit soldiers is $712.5 million. Projected levels of funding for IDT in fiscal year 2002 will only fund 44 of the 48 statutory drills—failing to fund one month's worth of drills per soldier. The projected level of funding is $662.5 million leaving a critical shortfall of $50 million. The expected executable/critical shortfall for Individual Duty Training is $50 million.

Operations And Maintenance, Army Reserve (OMAR)

The expected fiscal year 2002 DOD budget request for the Army Reserve Operations and Maintenance (OMAR) account is $1.6 billion. We believe there is at least a $157 million executable/critical OMAR shortfall in the fiscal year 2002 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 and contributing to a lower quality of life for unit soldiers.

Currently the expected OMAR appropriation is experiencing serious resourcing shortfalls in FTM, recruiting and advertising, automation system life cycle support, and the backlog of maintenance and repair amounting to more than $160 million.

Full-Time Manning: MILTECHs

The lack of adequate numbers of required military technicians (MILTECHs) in USAR units and maintenance facilities jeopardizes unit readiness. The Army has a validated requirement for 8,990 MILTECHs based on staffing standards that require minimum staffing levels of required MILTECHs of 90 percent for Force Package (FP)1 units, 80 percent for FP2 units, 70 percent for FP3 units and 65 percent for FP4 units. These percentage levels are considered the "high-risk" threshold for USAR and ARNG MILTECH authorizations.

The current USAR MILTECH endstrength of 7,094 is 1,896 below the validated requirement of 8,990. These MILTECHs will enable units to maintain a higher level of readiness by providing additional training, technical, functional and military expertise required to efficiently and effectively transition from peacetime to wartime posture.

The Fiscal Year 2001 Defense Appropriations Act and the 2001 NDAA recognized the requirement for additional FTM by providing $20.5 million in OMAR funding and the authorization for 650 MILTECH in fiscal year 2001. The Army has established a ramp of 250 MILTECH each year beginning in fiscal year 2002 to increase the level of MILTECH FTM positions within the USAR. Projected fiscal year 2002 costs to support the fiscal year 2001 MILTECH increase and the fiscal year 2002 ramp is projected to be $7.8 million. The executable/critical shortfall for the USAR MILTECH program is $7.8 million.

Advertising

Army Reserve advertising is expected to be underfunded by at least $13.5 million in the fiscal year 2002 budget request. Without adequate advertising funding, the Army Reserve will be unable to overcome the market effects of a strong economy and the low propensity of our nation's youth to enlist in the military.

The USAR fiscal year 2002 recruiting advertising requirement is $60.6 million, but it is funded at only $47.1 million. The Army Reserve must expand its Internet advertising to keep pace with new technology and media habits of the targeted market. It must also consider the expanding female and Hispanic markets. Women constitute only 25 percent of the USAR force, but can volunteer for 99 percent of the Army's job skills. Hispanics are also underrepresented in the USAR. The USAR recruiting environment is difficult. A good offset is a vibrant, adequately funded ad campaign that reaches the target audiences. The executable/critical shortfall for advertising is $13.5 million.

USAR Reserve Component Automation System (RCAS) Life Cycle Support

The RCAS infrastructure enables the USAR to integrate rapidly into joint organizations and is required to support Joint and Army C^4/IT systems/concepts, i.e., Defense Message System (DMS), Common Access Card (CAC) Global Combat Support System (GCSS) and others. The life cycle support of the fielded RCAS systems becomes the responsibility of each Reserve component in fiscal year 2002. The Army has insufficient TOA to fully resource these costs that the USAR must pay to maintain the systems worth $2.4 billion in capital investment.

RCAS is crucial to the USAR day-to-day CONUS/OCONUS operations and is designed to support virtually every type of mission including effective C^2, soldier's pay, mobilization, training, sustainment, and administration. The executable/critical shortfall for the RCAS Life Cycle Support is $45.2 million.

Real Property Maintenance

The USAR currently operates facilities in approximately 1,400 locations worldwide (CONUS, Puerto Rico, Germany, and the Pacific) and commands and controls 6 installations including 2 power projection installations (Fort McCoy, WI, and Fort Dix, NJ).

Real property maintenance is funded at only 61 percent of the fiscal year 2002 requirement. Historically, inadequate RPM funding has contributed to poor conditions in many USAR facilities, forcing unit commanders to spend scarce mission dollars for repairs and to defer repairs to critical facility systems such as roofs, plumbing, electrical, etc., accelerating facility and system deterioration. This threatens soldier safety, and health; degrades training, and hampers recruiting and retention efforts, while lowering the soldiers' quality of life. The projected fiscal year 2002 budget request critically underfunds the executable Real Property Maintenance account by at least $57.0 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", (the 2001 report is not available) 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.

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. ROA urges the Congress to continue the NG&REA and to fully fund the Army Reserve $458 million fiscal year 2002 equipment modernization requirement.

AIR FORCE RESERVE

Since the Air Force Reserve came into existence in 1948 until Desert Storm, it had been involved in 10 contingencies. In the time since Desert Storm it has been involved in over 30 contingency, nation-building and peace keeping operations. The reasons are obvious: the Active component has lost 700,000 people at the same time the United States has become the only super power on Earth. That has forced the Reserve component, which lost 200,000 members in the draw down, to assume a much larger share of the mission.

Its key issues are people, readiness and modernization. With support for those issues from the active the Air Force and the Congress, the Air Force Reserve has become an indispensable national asset. ROA thanks both for consistent support, that has allowed the command to demonstrate its skill in carrying out its portion of the national military strategy.

Specific Issues

Recruiting and Retention.—The active duty recruitment pool has diminished from 50,000 in the early 1990s to 13,000 in 2001. Further complicating the recruiting challenge is the current Air Force OPTEMPO. The Air Force Reserve Command would benefit from either reduced OPTEMPO or an increase in force structure. ROA urges the Congress to provide authorization for a force structure adequate for today's OPTEMPO and to provide parity of benefits with Active component members.

Modernization.—The Air Force Reserve Command must receive modern equipment at the same rate as the Active component. A prime example follows. As of spring, 2001 there is no stated replacement aircraft for AFRC's 40 C–141 strategic airlifters. By 2006 all C–141s will be retired. With them will go the 5,000 highly trained personnel who fly, maintain and support that portion of the strategic airlift mission and their 1.9 million ton-mile-per-day airlift capability. ROA urges the Congress to direct DOD to keep a minimum of 60 C–141 aircraft in AFRC until sufficient numbers of C–17s or a combination of C–17s and refurbished C–5s are acquired to keep all AFRC units fully equipped and to fulfill the ton-mile requirement of the national military strategy.

To a war-fighting CINC "interoperability" means that all forces in his fight must have the same capability. Without it, the forces with less capability are made irrelevant. Thus, day/night proficiency must be the same in both Active and Reserve components. Not just one component, but both components must have precision munitions capability. Both must have self-protection and electronic warfare capabilities, and both must have identical digital battlefield data-link equipment. ROA urges the Congress to fully fund the modernization of all AFRC assets.

NAVAL RESERVE

Thanks to the Congress, funding for fiscal year 2001 enabled the Naval Reserve to resource peacetime contributory support, bonuses, a substantial pay raise, real property maintenance, base operating support, and recruiting advertising/support. 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, without a detailed fiscal year 2002 President's Proposed Budget, the Reserve Officers Association must withhold substantive focused comment; however, we await the QDR01 and other national security reviews with anticipation for the continued recognition of the value of the Naval Reserve to our nation's security posture. The Naval Reserve's top five Issues continue to be manpower, training, equipment and systems compatibility, force shaping and fleet support and significant progress has been made in addressing many of these issues. Nevertheless, substantial unfunded requirements continue to slow progress toward complete force integration with the Fleet and cost greater amounts of scarce operations and maintenance resources than is desirable must be expended on operating and maintaining dated and obsolete, low performance, systems and platforms.

Naval Reserve end-strength was reduced from 90,288 in fiscal year 2000 to 88,900 in fiscal year 2001. The issue of peacetime contributory support versus surge training requirements continues to pull Naval Reserve personnel policies and operations in two different, not wholly compatible, directions. Highly trained, motivated and experienced Naval Reserve personnel should not be lost to the Naval Reserve Force during budget-driven reductions until the future national security direction is determined. ROA strongly urges the Congress to defer reduction of Naval Reserve end-strength below 88,900 pending completion of a comprehensive reexamination of the Naval Reserve's role to be conducted after the results of the QDR01 and other national security reviews are completed.

Specific Issues

Two Naval Reserve personnel programs in particular should be maintained: (1) Active Duty for Training is a program that provides Naval Reservists to the Navy CinCs for unique, short-term periods in support of Fleet requirements. ROA supports a funding level of $13.8 million for fiscal year 2002 for this highly successful program. (2) Additional support for non-prior service accessions allows Naval Reserve recruiters greater direct access to the public. This program accounts for approximately one-third of new USNR enlistees. ROA encourages the Congress to maintain current levels of funding for this effort in fiscal year 2002.

Equipment Modernization

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) and to earmark funding for the Naval Reserve in the traditional procurement appropriations. Accordingly, ROA has identified unfunded fiscal year 2001 Naval Reserve equipment requirements for consideration by Congress for addition to the administration's request for fiscal year 2002, in either the NGREA or as earmarked additions to the Navy's traditional procurement appropriations.

Among the top priorities are the C–40 aircraft, IT infrastructure, and the P–3 AIP/BMUP kits. As the number one priority of the Naval Reserve, the Boeing C–40A "Clipper" transport aircraft is of vital importance to fleet logistics as the Naval Reserve provides 100 percent of the Navy's organic lift capability, and direct logistics support for fleet CINCs in all operating theaters. Commercial aircraft are replaced every 7 to 8 years, yet the average age of the Naval Reserve's C–9 fleet is approximately 25 years. Obsolescence is being reached because of deficiencies in the avionics suite, power plant, and the aging of the airframe.

The P–3 AIP (ASUW Improvement Program) and BMUP (Block Mod Update procurement) kits bring Reserve maritime patrol aircraft in line with Active fleet capabilities and broaden the mission of the Reserve P–3Cs beyond the role of anti-submarine warfare. Additional funding is essential to sustain the momentum of the P–3C Update III upgrade program and to achieve complete compatibility with the Active fleet for the remaining 13 aircraft that have not yet been reconfigured.

Equipment modernization is the most critical priority for the Naval Reserve. ROA strongly urges the Congress to provide $471.6 million to support the vital and continuing Naval Reserve unfunded equipment needs in fiscal year 2002.

MARINE CORPS RESERVE

Because the Administration's fiscal year 2002 budget proposal has not been submitted in detail for congressional consideration at the time of testimony, the ROA supports the increase in end-strength to a level of 39,558 in fiscal year 2001 for the Selected Marine Corps Reserve (SMCR), but defers judgment of the fiscal year 2002 proposed end-strength. There was also slightly increased funding for Marine Corps Reserve personnel, to $437 million in fiscal year 2001, an increase of a little more than $1 million from fiscal year 2000.

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 (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.

Additional O&MMCR funds are needed for initial issue of equipment, replenishment and replacement of equipment, exercise support, and organizational and depot maintenance. Only by equally equipping and maintaining 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 Marine Corps Reserve personnel appropriation also appears to continue to be underfunded. The major deficiency in this appropriation is in the area of active duty for special work (ADSW). This valuable individual activity 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 duty counterparts. Further, ADSW provides critical support to Active force commanders, allowing them to augment Regular forces with Reserve Marines to participate in both USMC combined arms exercises and sched-

uled joint exercises in support of the warfighting CINCs. These are win-win efforts, not only making up critical shortfalls in the Regular Marine Corps forces, but also providing invaluable training for Marine Reservists.

The authorization of 58 additional Active Reserve personnel in fiscal year 2001 is essential to increased readiness and employment of Marine Corps Reserve units, and recognized the serious difficulties created for the Marine Corps Reserve by the Quadrennial Defense Review 1997 (QDR97) reductions in the Active Reserve program. These reductions significantly hampered the Reserve's ability 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, if implemented, will continue to undermine the Marine Corps Reserve's ability to maintain readiness and meet requirements for Reserve employment. To fiscal year 2000, the Marine Corps Reserve has taken the cuts directed by QDR97 and will continue with reductions through fiscal year 2003 if directed, but every cut taken in the Marine Corps Reserve decreases the operational or tactical capabilities of the Marine Corps. ROA strongly urges the Congress to direct DOD to defer any further QDR97-recommended reductions in the Marine Corps Reserve until these reductions can be reviewed by QDR01 and the other ongoing national security reviews.

Equipment Modernization

Modern equipment continues to be 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 continues to be Engineering Change Proposal 583 (ECP–583), which will make its F/A–18A aircraft compatible with the F/A–18Cs and Ds utilized by the Active force. As part of a complete modernization to achieve complete Force interoperability and support compatibility, this initiative will upgrade the aircraft to state of the art avionics and weapons systems. 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.

COAST GUARD

We are fully aware that this committee is not responsible for the direct funding of the Coast Guard or the Coast Guard Reserve. Nevertheless, funding for the Coast Guard is very austere, with only $3.199 billion in operational funding, the minimum level required for basic services. Similarly, funding for the Department of Defense and the Department of the Navy remains constrained. Therefore, it is vital to be farsighted as we cross into the 21st century to ensure a continued robust sea power.

The Coast Guard currently operates ships with high personnel and maintenance costs. Some ships have been in service for more than 50 years. Simply stated, the continued protection of the public, at a lower cost, requires further investment to enable the Coast Guard to design more capable and less labor-intensive ships and aircraft. Without the necessary investment, pressure will continue to build on the operational account, as anticipated lower personnel and maintenance costs that would be achieved through investment become unachievable. The Reserve Officers Association urges the Congress to fully support the Coast Guard's Integrated Deepwater Project, its new start authority, and the Navy's acquisition of assets for the Deepwater project.

COAST GUARD RESERVE

In the Defense Operations arena, the six Coast Guard Reserve port security units (PSUs) continued to provide non-redundant force protection to high-value assets in strategic seaports of debarkation. In December, following the terrorist attack on the U.S.S. *Cole*, elements of PSU 309, based in Port Clinton, Ohio, deployed in support of CENTCOM.

For fiscal year 2002, the priority is retain its force of 8,000 and ensure that Coast Guard Reservists are fully trained, equipped and ready to perform their mission. Specifically, for fiscal year 2002, the Coast Guard will work to:

— Improve the training and support infrastructure for the current force. This includes assurances of the availability of formal training and structured on-the-job training opportunities.

— Improve support services, such as full-time support staffing, and mitigate Reservists' out-of-pocket expenses, such as berthing for those who live over 50 miles from their drill sites.

Longer term, the Coast Guard will continue to refine and prioritize Reserve force requirements. There is considerable pent-up demand for additional Reserve support from operational commanders and headquarters program managers, and we believe the best course is to address these needs incrementally over several years so as not to exceed the service's ability to support and service the SELRES force.

Coast Guard Selected Reserve Strength

The fiscal year 2002 administration request is anticipated to maintain the Coast Guard Selected Reserve's authorized end-strength at the 8,000-level. In 1997, the commandant, as directed by OMB, conducted an in-depth study that justified a requirement for nearly 12,300 Coast Guard Reservists. However, the 1997 study did not include any maritime security requirements needed to counter more recently identified homeland security risks in U.S. ports and waterways from weapons of mass destruction. As a result of this and other issues, Coast Guard is currently updating the roles and mission study to identify more accurately the increased Reserve force end strength and skill mix.

Coast Guard Reserve Funding

The administration has requested $83.2 million for the Reserve Training (RT) appropriation for fiscal year 2002. Given the present procedures for reimbursement for operating expenses and direct payments by the Coast Guard Reserve, this is the minimum needed to fund a training program for 8,000 personnel. Even at the $83.2 million funding level, Coast Guard reservists would continue to receive only 12.5 days of annual training (AT) each year (all the other armed services prescribe 14 days' AT as required by statute). In additional, the RT appropriation will not be able to fund 15 days' ADT and 60 drills per year for Reservists assigned to expeditionary units to ensure they are ready for prompt deployment.

The funding required in fiscal year 2001 to support the full 8,000-level authorized was approximately $80 million. It should, however, be noted that the fiscal year 2001 appropriations bill, in appropriating $80 million for the Coast Guard Reserve, limited the amount of Reserve training funds that may be transferred to operating expenses to $22 million. Given the continuing high OPTEMPO/PERSTEMPO stress on the entire Coast Guard workforce and the congressional language to hold strength insofar as possible, the Coast Guard Reserve is trying to maintain its strength for this year.

Coast Guard Reserve Equipment

In fiscal year 1998, the Congress provided over $13 million for the much-needed refurbishment of its existing three port security units and the establishment of three additional port security units. Today, the Coast Guard Reserve is in need of equipment for its mobile support unit, as well as chemical, biological, and radiological defense equipment.

The mobile support unit (MSU) is designed to be a limited deployable logistical and maintenance support and repair facility service for up to two co-located squadrons of Coast Guard 110-foot patrol boats. This unit is staffed by Reservists and support the Active component (and the combatant commanders-in-chief) when deployed for operations overseas. The MSU provides on-site repair facilities for hull maintenance, engineering and electronics systems for use by support personnel assigned for operational maintenance.

Chemical, biological, and radiological defense is required for Coast Guard Reserve personnel assigned to marine safety offices that have Department of Defense strategic load-out responsibilities.

CONCLUSION

Thank you for the opportunity to represent the Reserve Officers Association's views on these important subjects. Your support for the men and women in uniform, both Active and Reserve is sincerely appreciated. I'll be happy to answer any questions that you might have.

Senator STEVENS. Vice Admiral Lautenbacher.

STATEMENT OF CONRAD C. LAUTENBACHER, JR., VICE ADMIRAL, U.S. NAVY [RETIRED], PRESIDENT, CONSORTIUM FOR OCEANOGRAPHIC RESEARCH AND EDUCATION

Admiral LAUTENBACHER. Mr. Chairman, Senator Inouye, thank you very much for the opportunity to appear before you this morning and discuss the fiscal year 2002 defense budget. I am the new President of the Consortium for Oceanographic Research and Education. I believe most of you know my predecessor, Admiral Jim Watkins. I have been in this position for several months and it is a delight to be here, and also to express my thanks to the committee in my former role as the Vice Admiral in charge of Navy programming and budget development.

I understand the time is short, so I want to keep it to four basic points that I would like to make this morning. The first is that our organization, as well as me personally, support a strong defense S&T budget. We believe it is critical for the leadership of our country as well as for the strong support of ocean science. As an example, the S&T budget for the Department of Defense in 1993 was roughly $10 billion. Today it is $9.1 billion.

We believe that this budget deserves the support of the committee and if at all possible to raise this at least back to the 1993 levels and get on track. The leadership of the country in terms of economic development and research and technology and industrial health and welfare depend on a strong defense S&T budget.

The second point that I want to make from our organization is that the national oceanographic partners program has become an excellent vehicle for cross-agency cooperation. This act was created by Congress—this was an act by Congress in 1996. It has been working for 3 or 4 years now very well. It brings 14 agencies together from the Federal Government to work in concert on ocean research and scientific issues. It is ready to step up to the next level.

My third and fourth points are the level that that should be stepped up to. There are two important initiatives that I believe are national initiatives. One is an integrated coastal and ocean observing system. If you ask any of the scientists in our organization what is needed if we are going to get to the next level of understanding of the issues that we need to understand for climate, for control of resources, for public policy, for quality of life, issues across our land that affect even the farm lands in the middle of our country, not just people who live on the coast, it is an ocean observing system. It is understanding what is happening on our coasts from Maine to Florida, in the Gulf, California, Alaska, Hawaii.

It is very important to us to be able to start building a database to understand the processes that create things like the carbon cycle and carbon sequestration and greenhouse gases, as well as to manage the coastal resources that we have. This integrated ocean observing system can be managed by the National Oceanographic Partnership Office (NOPP) program and we believe it is time to step up and put the right resources against this.

The last point that I want to make is another system which NOPP can help with very much and we would like your support on, and that is the recapitalization of the university oceanographic na-

tional laboratory system, or the UNOLS fleet. These are ships which are manned by our universities in support of national objectives. They help the Navy as well as basic research and science within our universities. They pick up a national workload as well as a workload from our coastal areas, from our States.

The fleet is old at this point. It needs to be recapitalized. It also needs help this year with its operating funds. This is an important issue.

In closing, I would like to thank in terms of the NOPP leadership the Office of Naval Research and our Naval Oceanographic Office. They have been instrumental in trying to make this program work and it is working very well.

Again, I appreciate the support of the committee for their efforts on behalf of me when I was in the Navy and for our organization of course. Thank you, sir.

Senator STEVENS. Thank you very much, Admiral.

[The statement follows:]

PREPARED STATEMENT OF VICE ADMIRAL CONRAD C. LAUTENBACHER, JR.

Good morning, Mr. Chairman. I want to thank you for the opportunity to testify on the fiscal year 2002 Defense budget. I am the President of the Consortium for Oceanographic Research and Education or CORE for short. CORE is the Washington, DC based association of U.S. oceanographic research institutions, universities, laboratories and aquaria. Our 63 members represent the nucleus of U.S. research and education about the ocean. CORE is united by a commitment to a strong defense science and technology base and believes that solid funding of the 6.1 account is critical to our Nation's security.

For three and one-half years, I was responsible for preparing the Navy five-year program. I believed deeply then as I do now, and it is the CORE position as well, that the Navy 6.1 account needs to be increased to meet the future needs of the Navy. Naval research today, will yield ocean warfare superiority 15 to 20 years from now. With many nations attempting to develop a blue water capability and project force, I recognize, more than most that what is in the lab today will have a profound affect on how we meet any future foreign contingencies.

Today, I want to emphasize the critical strategic value of basic research to all of DOD and the importance of maintaining the relationship between DOD, other Federal agencies, and the university research community. These partnerships have resulted in enormous benefit to all parties involved by significantly advancing the frontiers of knowledge in the world's oceans and atmosphere. As you may be aware, CORE currently manages the National Oceanographic Partnership Office which welds together multiple public (12 agencies) and private entities (academic and industrial) in ocean S&T under the law of Congress passed in 1996. NOPP has demonstrated that working together, the ocean community at all levels can get more out of combined efforts than if they had acted as independent and autonomous players. The more I see NOPP working, the more impressed I become at the depth and commitment to collaboration across multiple agencies.

I want to personally commend the Subcommittee for its support of basic research at DOD in the fiscal year 2001 appropriation bill. Fiscal year 2001 was a milestone year for basic research. Last year the civilian and defense accounts, when combined, resulted in a total basic research portfolio that amounted to just over $20 billion. In the past, it has been far too easy to sacrifice our long-term research needs to meet short-term fiscal goals. I have to point out that in fiscal year 1993, the 6.1, 6.2 and 6.3 accounts at DOD were funded at a level of $10 billion. Last year in fiscal year 2001, while gains were made in these functions, we funded those same accounts at a level of $9.1 billion. In real terms, DOD research was hit hard in the decade following the Cold War's end.

The support of this Subcommittee is critical to ensuring that we maintain a viable S&T base to meet our future security needs on land, in the air, and of course, on the sea. For fiscal year 2002, CORE urges the subcommittee to fund DOD's S&T program at $10 billion in fiscal year 2002. CORE hopes that in fiscal year 2002 we can bump research at DOD to that level to ensure a robust defense science base.

This committee has given strong support to the defense S&T program in the past. Today, in my limited time, I would like to share a few examples from my personal

experience of how central defense basic research programs are to the long-term national security needs of our country. I am going to use satellite programs as the example and I will explain why it is relevant to the ocean sciences.

In the past, we had several agencies that ran meteorological satellite programs that were independent of one another. The Department of Commerce's (DoC) National Oceanic and Atmospheric Administration (NOAA) and DOD, with technical support from the National Aeronautics and Space Administration (NASA), used to run essentially separate meteorological satellite programs and the exchange of information was limited. That changed in 1994 with a Presidential Decision Directive. This directive consolidated the Defense Meteorological Satellite Program and the civil Polar-orbiting Operational Environmental Satellite system into a single program. It required the establishment of a joint agency group with representatives from DoC and DOD to establish data needs of the parties involved and also required a 50–50 cost-sharing agreement.

As a result of the convergence of assets between DoC and DOD, we avoided over $1.5 billion in duplicative costs. This program is known today as the National Polar-Orbiting Operational Environmental Satellite System (NPOESS). The program value is $6.5 billion and the system contract award is due next year. It will result in 6 NPOESS satellites being built to serve both civilian and military mission requirements. It has already resulted in meshing data needs between military and civilian agencies.

This is a remarkable development in the research world because it marks a move towards integration and cross-fertilization of research assets across a military-civilian threshold that no one had contemplated, or even thought possible. DOD and NOAA have worked out the data requirements and ground station logistics to serve both of their operational mission requirements.

While weather forecasts are the primary purpose of the NPOESS program, ocean measurements drove the design of three of the major sensors onboard the spacecraft. As a result, we will now get improved measures of sea surface temperatures, sea surface winds, ocean currents and a host of other observations. These measurements are needed to better understand the role of the oceans in climate, and will be useful to military planners in their operational theaters. The integration of resources and a collaborative approach has benefited both DOD and NOAA and is based on the research portfolios of both organizations using their collective research expertise to make it work.

Another solid example of this collaborative approach is the National Oceanographic Partnership Program (NOPP). NOPP consists of the Navy, NOAA, NASA, National Science Foundation, Environmental Protection Agency, Minerals Management Service, United States Geological Survey, Army Corps of Engineers, and the Department of Energy. NOPP is doing for ocean researchers what NPOESS has done for the meteorological satellite community. NOPP's innovative organizational approach both within the federal government and within the national ocean community was needed to promote interdisciplinary research, cooperatively operate distributed observing systems, manage information from numerous sources, and meet agency mission requirements. NOPP has exceeded expectations and it is critical that the government fosters these cooperative and reciprocal relationships to sustain such activities.

I believe that this multi-agency management of research assets needs to become the operational norm for the federal government. The satellite example and NOPP are just one of several programs that are now beginning to drive a more integrated research approach that results in more and better data at lower cost for all program participants.

However, it is clear to me that if this move toward research integration is to occur on a national scale, there must be a long-term commitment to funding the basic research that underpins this new approach to the management of research assets. With an appropriate policy framework that links agency commitments with the Administration and Congress, programs like NPOESS and NOPP have given the federal government ways to do a better job at lower cost. I believe that if we commit the funding resources necessary, the nation will realize many economic, environmental, and public health benefits as a result of this new approach. These benefits cannot happen in the absence of adequately funded research, including the Defense S&T Program.

I would be pleased to discuss this issue further at your convenience. I appreciate the opportunity to appear before you and would be happy to answer any questions you may have.

Senator STEVENS. Our next witness, Dennis Achgill. Good morning.

STATEMENT OF DENNIS ACHGILL, AMERICAN SOCIETY OF MECHANICAL ENGINEERS INTERNATIONAL

Mr. ACHGILL. Good morning. Thank you, Mr. Chairman, Senator Inouye. My name is Dennis Achgill. I appear before you today as a representative of a committee of the American Society of Mechanical Engineers (ASME), International, concerned with Federal funding of research and development. ASME International has 125,000 members, including 20,000 students. Mechanical engineers are a major part of the Nation's technology base, a base that is essential for the Nation's defense.

Out of all the engineering disciplines, mechanical engineering claims the largest share of DOD engineering funding at 23 percent. Therefore, we appreciate 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.

The single most important message I would like to convey to you today is, as a result of the declining support for defense-related research and development for much of the past decade, the defense industry has had great difficulty in attracting and retaining the best of the best engineering and scientific talents of this Nation. The defense industry now has a work force whose average age has been increasing at an alarming rate. That is why we are pleased with the efforts of your subcommittee in reversing this declining support.

We sincerely believe that your continued support in strengthening defense-related engineering sciences is essential for meeting the future needs of the DOD. The valuable contributions of our engineers and scientists have been a constant and powerful force over the past four decades. These contributions could not have been made without the vision and support of members of Congress like yourselves, who promote the continued strengthening of this Nation's investment in DOD science and technology programs.

Defense agencies have historically been the largest source of Federal funding for engineering research in our industry, as well as at the Nation's universities. The universities are significant collaborators with industry and are the source for young engineering talent for the defense sector for both public and private.

Funding for defense-related research and development peaked at $9.8 billion in fiscal year 1993. The decline in support subsequent to 1993, together with an accompanying pattern in which advanced technology demonstration programs designed to accelerate the insertion of research efforts would be stretched out, delayed, and cancelled, resulted in the waste of valuable resources, confusion, and deterrent to attracting a generation of highly skilled, highly motivated engineers and scientists, the folks who transform ideas into reality.

As research and development budgets were reduced, the job market for engineers in the defense sector shrunk, leaving little incentive for young engineers to seek defense-related career opportunities. Continued unabated, the repercussions of a declining defense investment in research will inevitably extend to the commercial sector as well. Without question, America's civilian aviation industry has benefited greatly from the technological advancements in defense. The situation facing the United States could be a techno-

logically deficient military together with a subpar civil aviation industry. Obviously, neither scenario is in the best interests of the Nation.

We applaud the support that your subcommittee provided DOD science and technology programs for the past 2 years. The fiscal year 2001 budget for the 6.1, 6.2, and 6.3 accounts were increased about 6 percent or $600 million from the previous year, for a total of $9 billion.

We strongly urge your continued support for a balanced portfolio of physical and life sciences accompanied by a healthy increase in these accounts for fiscal year 2002 and beyond. In 1998 the Defense Science Board recommended that the research programs of the DOD should consistently be about 3.5 percent of the total defense budget. We believe this is a worthy target, one that will result in an investment approaching $11 billion in fiscal year 2002. This would also be consistent with President Bush's commitment to increase the defense R&D by $20 billion over the next 5 years. That is why I urge the members of this subcommittee to continue their support.

It will take a great deal of continued attention to defense R&D to ensure that the best engineering and scientific minds are once again willing to apply their talents to meeting the future needs of this Nation.

Thank you for the opportunity to offer our views.

Senator STEVENS. Thank you very much.

[The statement follows:]

PREPARED STATEMENT OF DENNIS ACHGILL

Introduction

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.

ASME has 125,000 members including 20,000 students. Mechanical engineers are a major part of the nation's technology base that is essential for the nation's defense. Out of all of the engineering disciplines, mechanical engineering claims the largest share of DOD engineering research funding, at 23 percent.

We applaud the support that your Subcommittee provided DOD Science and Technology (S&T) programs for fiscal year 2001. The budget for the basic 6.1, applied 6.2 and advanced technology development 6.3 accounts were increased about six percent, for a total of $9 billion.

We are also pleased to see President Bush's proposed increase for Research and Development (R&D) in DOD R&D in his "Blueprint for New Beginnings." According to the blueprint, the DOD budget for R&D in new technologies would increase $2.6 billion in fiscal year 2002 ($20 billion over five years). However, we do not know how much of that increase would go to the 6.1, 6.2 and 6.3 accounts, the extent to which it may be dedicated for missile defense, or whether there will be offsetting cuts in other DOD R&D programs.

Funding for S&T peaked at $9.8 billion in fiscal year 1993. The budget for basic, applied, and advanced technology development programs declined until fiscal year 2000 when the S&T accounts were increased to $8.4 billion, and again in fiscal year 2001, when they were increased to $9 billion. We strongly urge this Subcommittee to continue strengthening the nation's investment in the DOD S&T programs.

Because program-level details in the fiscal year 2002 budget are not yet available, it is too early to assess the full impact of the DOD S&T budget request. The balance of our testimony will focus on the role of research at DOD, the benefits derived from that research, and the importance of increasing funding for fiscal year 2002.

Role of Research at the Department of Defense

Investment in DOD S&T programs produced the scientific and engineering research underlying today's preeminent U.S. military forces. As increasingly varied

and unpredictable threats to America develop in the coming years, this technological superiority will become a national security imperative.

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 extremely serious, one that could jeopardize the ability of the United States to maintain air and ground superiority over potential adversaries in the coming years.

The research of today, particularly the basic research of today, largely determines the technological advancements of a decade or more from now. For example, thermal imaging, the ability to see objects by minute differences in the heat they emit, matured in the 1980's and now makes it possible to see through smoke, fog, and dust at long ranges in day or night. Civilian applications from Defense Basic Research in thermal imaging enable us to monitor earth resources from space, detect cancer, and gaze with greater clarity into space.

Similarly, no one foresaw the enormous range of applications and whole industries that have evolved from the Defense-sponsored discovery of lasers. Applications have included the billion-dollar fiber optic industry, compact disk players, laser printers, procedures to attach eye retinas, and new cancer surgeries.

Researchers are currently working on "inverse" scattering—an attempt to find the shape of an unknown object given only data about the ingoing waves and the echoes that reflect back from the object. Detection of underground objects by microwave detection will soon be realized. There are urgent practical applications of this research for our military. The ability to detect and acquire significant information about mines and buried bunkers on a battlefield could preserve American lives in future battles. In a different direction, the development of such technology would enable reconnaissance organizations to detect the presence of underground bunkers where nuclear weapons are secretly being made and stored.

Other examples of current research programs that are important for our national security include:

Rotorcraft technologies.—Historically strong cooperative programs between DOD and NASA produced the advanced technologies needed to provide the advances in rotorcraft technology for the future military applications. However, recent reductions in NASA's aeronautics R&D budget have effectively terminated this cooperative effort. Rotorcraft are crucial to national defense and we urge the Committee to work with their colleagues to reestablish the continuation of this essential and highly effective cooperative effort between DOD and NASA.

Aircraft Propulsion Technologies.—The Integrated High Performance Turbine Engine Technology (IHPTET) program which is directed towards developing versatile affordable advanced turbine engines, is a new initiative within the Department's R&D activities. We urge the Committee to sustain support for this technology development program in order to ensure its availability for next generation of military aircraft.

Consequences of Declining Investment in Research

The decline in defense-funded research and development that began in 1993 and continued until recently, resulted in a serious disruption in the cycle of highly skilled, highly motivated engineers and scientists who have been the mainstay of the nation's defense technology base. As research and development budgets were reduced, irreplaceable research facilities and infrastructure were destroyed to reduce corporate overhead costs.

The defense agencies have historically been the largest source of federal funding for engineering research at the nation's universities. The decline in support has led many engineering departments to seek other sources of support, thereby threatening the important contributions of the nation's universities to the U.S. defense technology base.

Bachelors degrees in engineering awarded by America's universities declined from a peak of 78,178 in 1986 to 63,635 in 2000. As defense research and development budgets were reduced, the job market for engineers in the defense industry shrunk, leaving little incentive for young engineers to enter the defense industry. They have, instead, been attracted to areas with exciting new challenges and where federal investment in R&D has been strong—in areas such as bioengineering and information technologies.

However, the repercussions of neglect in defense research will inevitably extend in the future to the private sector as well. For example, without question, America's civilian aviation industry has benefited greatly from technological advancements in defense. In short, the situation facing the United States in 2020 could be a techno-

logically deficient military that also results in a sub-par civil aviation industry. Obviously, neither scenario is in the best interest of the nation.

Recommendations

We applaud the subcommittee's efforts to reverse the decline in funding for basic, applied and advanced research programs at the Department of Defense. We strongly urge you to support a healthy increase in the 6.1, 6.2 and 6.3 accounts for fiscal year 2002 and beyond. In 1998, the Defense Science Board recommended that the research programs of DOD should consistently be about 3.5 percent of the total defense. We believe this is a worthy target, which would result in an investment approaching $11 billion for fiscal year 2002.

It should also be noted that as DOD S&T declined in the 1990s, the federal investment in research in engineering and the physical sciences declined overall. Other federal agencies did not pick up the slack. Although we support the rapid increase in federal investment in the life science in recent years, neglect for funding of research in engineering and the physical sciences should be of great concern to members of this subcommittee. A balanced portfolio of research and advances in engineering and the physical sciences is essential for maintaining U.S. technological leadership in areas critical to defense.

Thank you for the opportunity to offer our views on the science and technology budget request of the Department of Defense.

ASME International is a non-profit technical and educational organization with 125,000 members worldwide. The Society's members work in all sectors, including industry, education, and government. This statement represents the views of the DOD Task Force, of the Inter-Council Committee on Federal Research and Development, and is not necessarily a position of ASME as a whole.

Senator STEVENS. Mr. Harnage, National President, the American Federation of Government Employees.

STATEMENT OF BOBBY L. HARNAGE, SR., NATIONAL PRESIDENT, AMERICAN FEDERATION OF GOVERNMENT EMPLOYEES, AFL–CIO

Mr. HARNAGE. How are you doing, Mr. Chairman. Mr. Chairman, thank you for the opportunity to speak before the Senate Defense Appropriations Subcommittee. My name is Bobby Harnage, Senior, and I am National President of the American Federation of Government (AFG) Employees, representing some 600,000 Federal and D.C. government employees. I will discuss today three of our service contracting concerns expressed in our written testimony: the need to track the cost of contracting, the need for real public-private competition for our work and new work before it is given to contractors, and the need to use public-private competition to hold contractors accountable to the same extent that civilian employees are.

I will leave the relevant experts from recent Inspector General (IG) and General Accounting Office (GAO) reports to my written statement. However, I will note that GAO has reported that, despite spending almost $100 billion last year alone on contractors, DOD still has "not developed a proposal to revise and improve the accuracy of the reporting of contract service costs. DOD officials stated that the momentum to develop a proposal to improve the reporting of contract service costs had subsided. Without improving this situation, DOD's reports on the cost of contract services would still be inaccurate and likely understate what DOD is paying for certain types of services."

For DOD, giving work to contractors is still more important than ensuring that work is done right. That is not just bad for civilian employees, that is bad for war-fighters and taxpayers as well. The Army deserves recognition and encouragement for its recent establishment of an inventory to track the cost and size of its contractor

work force. I ask that the subcommittee require that other parts of DOD use the Army's system in establishing their own inventories.

Requiring public and private competition. Despite the fact that A–76 is still a money-loser overall and after all these years, fair and full public-private competitions for genuinely commercial activities performed by contractors as well as civilian employees have the potential to save money for the taxpayers. However, because public-private competition is merely an option for DOD, there are no incentives for DOD to take it seriously.

Given the problems within A–76 and the service contracting generally, you may be surprised, Mr. Chairman, that I do not come before you and demand an end to all servicing contracting forever and ever. I am actually coming to you with a much different request: require DOD to give Federal employees opportunities to compete in defense of their own jobs as well as new work. The number of civilian employees has fallen by almost 300,000. Spending on service contracting has rocketed ever upward, but less than one percent of service contracts in 1999 were undertaken after an A–76 review.

That is, DOD has dramatically increased service contracting and reduced its own civilian employee work force while almost never using public-private competition. According to the IG, there is often little competition among contractors for work. If GAO reports that savings are possible from individual A–76 competitions and if DOD insists that savings are generated through A–76 competitions generally, whether the work stays in house or is contracted out, then civilian employees should be allowed to compete for more work, both their own work as well as new work.

That is why the subcommittee should establish a requirement that DOD consider in-house performance before giving any work to contractors.

Our third concern is contracted-in. Mr. Chairman, AFG has long believed that if savings were possible by competing the jobs of Federal employees, then they were possible by competing the jobs of contractors as well. As you know, A–76 provides for in-sourcing as well as out-sourcing. The same rules and the same rationale apply.

At a time when the Pentagon is supposedly championing public-private competition, less than 3 percent of all A–76 studies performed by DOD were directed at work performed by contractors. In other words, public-private competition is being used to replace civilian employees.

DOD should be required——

Senator STEVENS. I am sorry, I have to stop you there. They tell me I have to vote.

Mr. HARNAGE. Thank you very much for this opportunity.

Senator STEVENS. I am sorry to do this to you.

[The statement follows:]

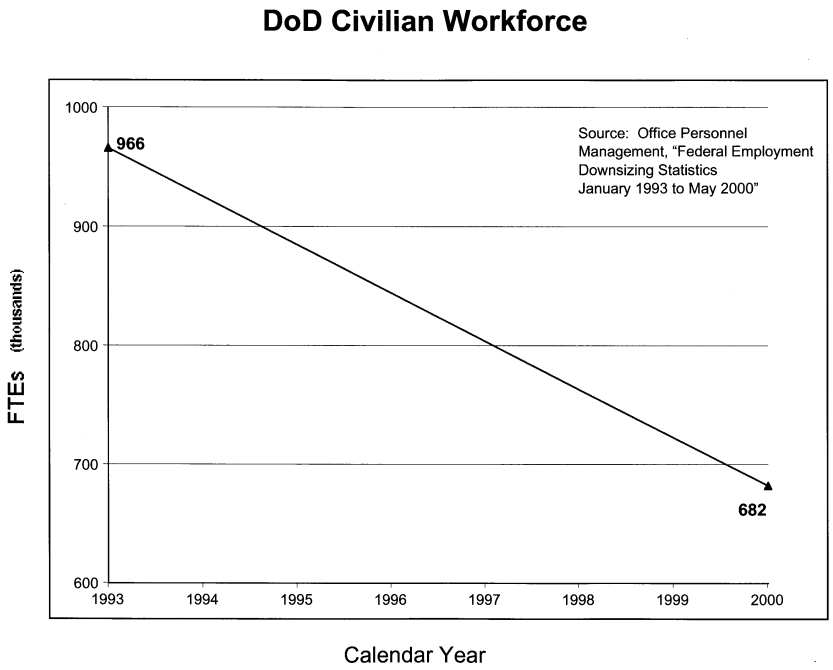
PREPARED STATEMENT OF BOBBY L. HARNAGE, SR.

My name is Bobby L. Harnage, Sr., and I am National President of the American Federation of Government Employees. On behalf of the American Federation of Government Employees, AFL–CIO, which represents more than 600,000 federal employees, including 200,000 in the Department of Defense (DOD), who serve the Amer-

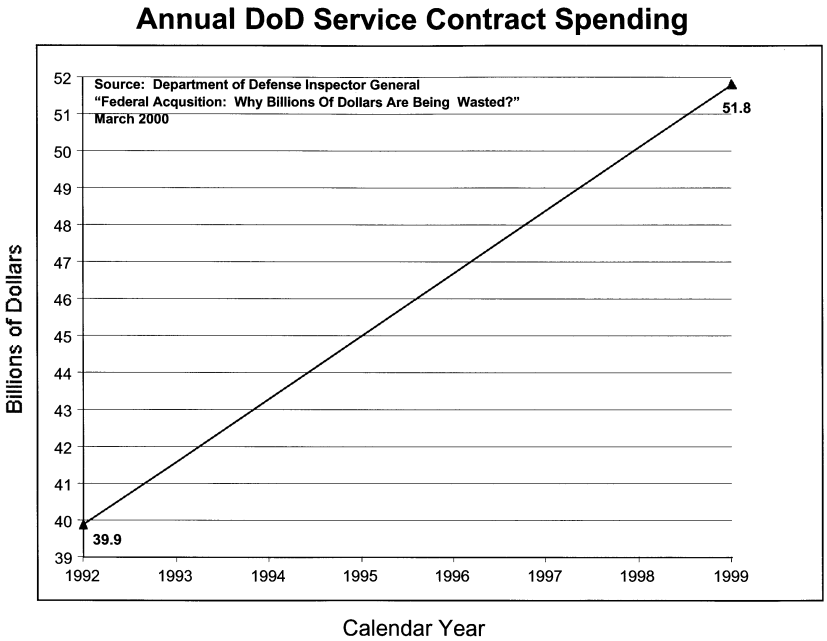
ican people around the world and across the nation. Mr. Chairman, I thank you for this opportunity to speak before the Senate Defense Appropriations Subcommittee.

Problem #1: DOD is spending more and more on service contracting for less and less.

In fact, we don't even know how much DOD is spending on service contracting, let alone if those hundreds of billions of taxpayer dollars are being spent wisely. We do know that the cost to taxpayers of service contracting has increased drastically. Over the last eight years, Pentagon officials have systematically replaced federal employees with contractors, often regardless of whether or not it makes any sense. According to the Office of Personnel Management, the DOD civilian workforce fell from 966,000 to 682,000 in 2000. (Chart 1) Service contracting, on the other hand, increased from $39.9 billion in 1992 to $51.8 billion in 1999, according to the Inspector General (IG). (Chart 2)



[Chart 1]



[Chart 2]

It's clear that the emphasis in DOD's service contracting crusade has been giving the jobs of federal employees to contractors, not in making sure that work has been well done.

> ". . . DOD managers and contracting personnel were not putting sufficient priority during the 1990's on (service contracting), which likewise was virtually ignored for the first few years of recent acquisition reform efforts. Consequently, we think the risk of waste in this area is higher than commonly realized . . . We reviewed 105 Army, Navy, and Air Force contracting actions, valued at $6.7 billion, for a wide range of professional, administrative, and management support services amounting to about 104 million labor hours, or 50,230 staff years. We were startled by the audit results, because we found problems with every one of the 105 actions. In nearly 10 years of managing the audit office of the IG, DOD, I do not ever recall finding problems on every item . . ."
>
> Robert J. Lieberman, Assistant Inspector General for Audits, Department of Defense; "Federal Acquisition: Why Are Billions of Dollars Being Wasted?" (testimony before the House Subcommittee on Government Management, Information, and Technology); March 16, 2000.

One of the principal architects of DOD's massive transfer of work from federal employees to the private sector was sheepish when asked during a Senate Readiness Subcommittee hearing last year about the IG's damning report:

> ". . . I agree with (the IG about) needing significant improvements in service contracting . . . (T)his has become a major challenge for us . . . (W)e have to really significantly improve our service buying . . . (I)t's probably going to take us a few years . . . to shift towards really professional service buying."
>
> Jacques Gansler, Under Secretary for Acquisition & Technology, Department of Defense; "A Hearing on Acquisition Reform" (testimony before the Senate Subcommittee on Readiness); April 26, 2000.

The General Accounting Office (GAO) has weighed in as well, both with respect to service contracting undertaken pursuant to OMB Circular A–76 and service contracting generally.

> "Efforts to improve the accuracy of data on savings from A–76 (public-private competition) studies at the time the studies are completed are warranted, as are efforts to assess savings over time. Both are key to establishing more reliable savings estimates and improving the credibility of the A–76 program amidst continuing questions in Congress and elsewhere."
>
> General Accounting Office, DOD Competitive Sourcing (NSIAD 01–20), December 2000.

In an earlier report on A–76, GAO had noted that entries in the Commercial Activities Management Information System (CAMIS), the system that is supposed to be used to monitor contracts undertaken pursuant to the circular,

> "are not modified and are being used continuously without updating the data to reflect changes in or even termination of contracts. DOD officials have noted that they could not determine from the CAMIS data if savings were actually being realized from A–76 competitions. Our work continues to show important limitations in CAMIS data . . . During our review, we found that CAMIS did not always record completed competitions and sometimes incorrectly indicated that competitions were completed where they had not yet begun or were still underway. We also identified where savings data recorded for completed competitions were incorrect based on other data provided by the applicable service."
>
> General Accounting Office, DOD Competitive Sourcing: Results of Recent Competitions (NSIAD–99–44), March 2000.

According to a recent GAO report, DOD has chosen not to keep its commitment to the Congress to improve its system for reporting the costs of contract services.

> "The Department of Defense (DOD) spends tens of billions annually on contract services—ranging from services for repairing and maintaining equipment; to services for medical care; to advisory and assistance services such as providing management and technical support, performing studies, and providing technical assistance. In fiscal year 1999, DOD reportedly spent $96.5 billion for contract services—more than it spent on supplies and equipment. Nevertheless there have been longstanding concerns regarding the accuracy and reliability of DOD's reporting on the costs related to contract services—particularly that expenditures were being improperly justified and classified and accounting systems used to track expenditures were inadequate . . .
>
> ". . . DOD has not developed a proposal to revise and improve the accuracy of the reporting of contract service costs. DOD officials told us that various internal options were under consideration; however, these officials did not provide any details on these options. DOD officials stated that the momentum to develop a proposal to improve the reporting of contract services costs had subsided. Without improving this situation, DOD's report on the costs of contract services will still be inaccurate and likely understate what DOD is paying for certain types of services."
>
> General Accounting Office, CONTRACT MANAGEMENT: No DOD Proposal to Improve Contract Service Costs Reporting (01–295), February 2001.

DOD's failure to track the billions and billions of dollars in increased service contracting has of course resulted in giving taxpayers the business, so to speak. However, it's also shafted DOD's civilian employees, the working and middle-class Americans who helped the nation win the Cold War and become the world's preeminent power. They are nearly 300,000 fewer, many of them having been replaced by contractors over the last eight years. And, adding insult to injury, DOD can't even begin to make the case that this wholesale transfer of work to the private sector was actually done in the name of efficiency.

Solution #1: Require that the rest of DOD use the methodology developed by the Army to track the size and cost of its massive contractor workforce.

One part of DOD is striving to deal with this longstanding problem and deserves our praise and encouragement: the Army. As the result of a recently issued rule, the Army has established an inventory to track the growth in the cost and size of

the service's contractor workforce in a comprehensive, reliable, and contractor-friendly fashion.

> "(The Army's new contractor inventory will) provide unprecedented departmental level visibility of the missions supported and functions performed by contractors" and will allow the Army to "assess whether, and to what extent, contractors may be performing (inherently governmental) functions, or commercial functions, which, when contracted out beyond a certain level of reliance, increase operational risks to overall Army mission capabilities and readiness . . . The capabilities provided by service contractors consume at least one third of the Department's obligation authority; and yet, due to lack of reliable data, senior Army planners lack the ability to assess the total manpower capabilities within a function and major Army organizations that may rely heavily on contract support. The data collected under this reporting requirement will remedy these defects . . ."
>
> Department of the Army; Final Rule on "Report on Use of Employees of Non-Federal Entities to Provide Services"; Federal Register; 32 CFR 668, December 26, 2000.

The GAO has already endorsed the approach taken by the Army:

> "Data on the full range of agencies' activities, whether performed by federal personnel, *or contract*, could inform managers and other decision makers about how they are performing their mission and mission support activities, and how they have currently allocated their resources." (Emphasis added)
>
> General Accounting Office, Competitive Contracting (NSIAD–00–244), September 2000.

The former president of the Professional Services Council, a contractors' special interest group, told the Bureau of National Affairs' Federal Contracts Report, on March 21, 2000, that the rule "should not be harmful in light of the fact that (compliance) is not coupled with receiving payment."

Meticulous statistics are kept about federal employees, their numbers, their salaries, their work. Virtually nothing, however, is known about the federal government's four million-strong contractor workforce. The work of federal employees is transparent as a result of the budget process, the appropriations process, the Federal Activities Inventory Reform Act, and the Government Performance and Results Act. The Army's contractor inventory will finally ensure the beginning of that same transparency with respect to the service's contractor workforce.

Problem #2: Too much work is contracted out without public-private competition.

Pentagon officials have made a lot of claims about savings from the use of OMB Circular A–76 that they have been unable to substantiate. In fact, A–76, after all of these years, is still a money-loser. According to GAO's DOD Competitive Sourcing: Some Progress, but Continuing Challenges Remain in Meeting Program Goals (NSIAD–00–106) report from last year,

> "While our work has shown that savings are being realized from individual A–76 studies, overall program costs to date are still exceeding savings. The President's fiscal year 2001 budget submission reports that during fiscal year 1998 and 1999, the overall costs of the A–76 program have exceeded the expected savings."

Despite A–76's record, fair and full public-private competitions for genuinely commercial activities performed by contractors as well as federal employees have the potential to save money for the taxpayers. However, because public-private competition is merely an option for Pentagon officials—A–76, already riddled with waivers, loopholes, and exceptions, is a circular and does not have the force of law—there are no incentives for DOD to take it seriously.

Indeed, because federal employees win too many of the competitions for the contractors' liking (60 percent), the competitions take too long, the competitions cost too much, and the predicted savings don't materialize, DOD has, in some instances, abandoned what should be a bedrock principle of public-private competition in favor of a nebulous and increasingly worrisome concept known as "strategic sourcing," while keeping the arbitrary civilian personnel quotas.

Although Bush Administration officials are talking about competing at least 425,000 federal employee jobs, it won't be long until they discover that A–76 savings are usually illusory, based in legends rather than in ledgers, and hear the same old complaints from the private sector that contractors aren't winning often enough and

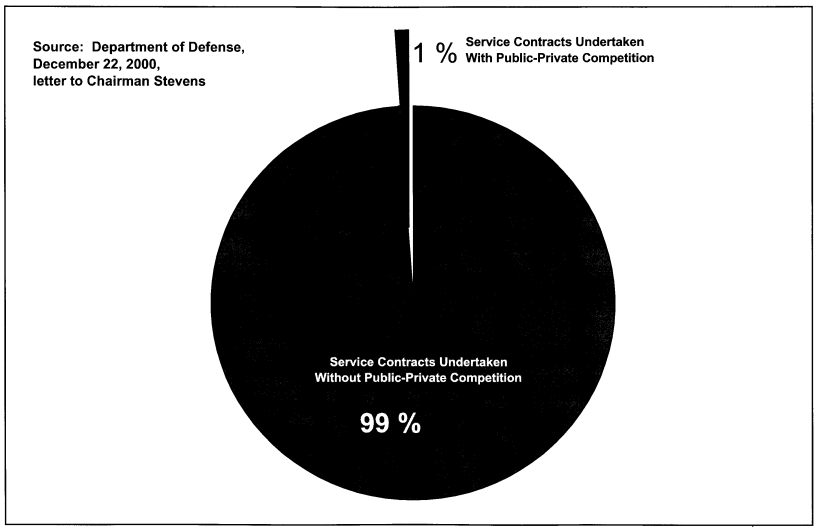
they aren't taking our jobs fast enough. Thus, it likely won't be long until the Bush Administration follows the Clinton Administration's example of retaining arbitrary civilian personnel quotas but moving away from public-private competitions in favor of strategic sourcing, i.e., direct conversions to contractor performance as well as downsizing civilian employees and then replacing them with federal employees.

Solution #2: Require that work performed by civilian employees as well as new work be subjected to public-private competition before it is given to contractors.

Given the severe problems with A–76 and service contracting generally, you may be surprised Mr. Chairman, that I don't come before you and demand an end to all service contracting, forever and ever. I'm actually coming to you with a much different request: require DOD to give federal employees opportunities to compete in defense of their own jobs as well as for new work.

As you may know, Mr. Chairman, in DOD, almost all work is given to contractors without any public-private competition. (Please see Chart 3.)

Percentage of DoD Service Contracts in FY99
Subject To Public Private Competition



[Chart 3]

"(C)ontracts resulting from a cost comparison performed in accordance with OMB Circular A–76 represent an extremely small portion of the total number of service contracts awarded by the Department during fiscal year 1999 (less than 1 percent). Further, these contracts represent a very small portion of the total dollars awarded by DOD to private sector contractors during fiscal year 1999."

Jacques Gansler, Under Secretary for Acquisition & Technology, Department of Defense; Senate Report 106–53; December 26, 2000.

"From fiscal year 1992 through fiscal year 1999, DOD procurement of services increased from $39.9 billion to $51.8 billion annually. The largest subcategory of contracts for services was for professional, administrative, and management support services, valued at $10 billion. Spending in this subcategory increased by 54 percent between 1992 and 1999."

Robert J. Lieberman, Assistant Inspector General, Department of Defense; "Federal Acquisition: Why Are Billions of Dollars Being Wasted?" (testimony before the House Subcommittee on Government Management, Information, and Technology); March 16, 2000.

That is, DOD has dramatically increased service contracting and reduced its civilian employee workforce—while almost never using public-private competition. In

fact, there is often little competition among contractors for work. The IG reported that in excess of three-fifths of the contracts he and his staff surveyed suffered from "inadequate competition." Regardless of the level of private-private competition, 77 percent of the surveyed contracts had "inadequate cost estimates" that "clearly left the government vulnerable—and sometimes at the mercy of the contractor to define the cost."

DOD managers need not be at the mercy of sole-source contractors, however. If GAO reports that savings are possible from individual A–76 competitions and if DOD insists that savings are generated through A–76 competitions generally whether the work stays in-house or is contracted out, then federal employees should be competing for more work, both their own as well as new work.

If DOD were being run in the interests of warfighters and taxpayers, Pentagon officials would be actively considering in-house performance of work. Would a firm in the private sector—a big defense contractor, let's say—automatically contract out almost all new work, as DOD does today? Of course not.

It's a homely metaphor but today, in the federal services marketplace, there are two shops, a civilian employee shop and a contractor shop. However, Pentagon officials have instructed managers never to use the civilian employee shop—no matter how much more effective we are, no matter how much more efficient we are, and no matter how much more reliable we are.

That's why the Subcommittee should establish a requirement that DOD consider in-house performance before giving work to contractors. For those public-private competitions we win, warfighters and taxpayers will be well-served. As for those competitions we lose, we'll learn from our mistakes and strive to prevail the next time similar work is competed.

Institutionalizing the public-private competition process will also help to address some of the problems with A–76 I identified earlier. For example, if DOD understands that public-private competition is not an optional extra, they will have incentives to better administer their contracts and to develop the capacity to expeditiously and economically conduct public-private competitions.

Another example is in-house personnel ceilings. Work that either should be performed by civilian employees because of its inherently governmental nature or could be more efficiently performed by civilian employees is contracted out in order to stay under onerous personnel ceilings. A public-private competition requirement, however, eliminates any incentive to discriminate against the civilian workforce because DOD would have to consider in-house performance. Pentagon officials would have to shift from downsizing the civilian workforce in favor of rightsizing the civilian workforce.

Problem #4: Work performed by civilian employees is being directly converted to performance by "Native American" contractors without any public-private competition.

A loophole included in a general provision in the defense appropriations bill allows for work performed by federal employees to be directly converted to contractor performance if the contractor happens to be "under 51 percent ownership by an Indian tribe." In the last two years, this loophole has been used twice by the Air Force to deprive 600 public works civilian employees of their jobs at MacDill Air Force Base, FL, and Kirtland AFB, NM. The National Imagery and Mapping Agency (NIMA) is now poised to use the direct conversion process against 600 civilian employees at installations in the St. Louis, MO, and Washington, DC, areas.

I am proud that AFGE is as diverse as the federal workforce. This union obviously bears no animus towards Native Americans. Moreover, we do not oppose the use of 8a set-aside contracts that benefit, among others, Native Americans. However, this direct conversion process is fundamentally different from 8a set-aside contracts. It must also be noted that the civilian employees who lose their jobs as a result of these direct conversions—who, incidentally, are in many cases members of minority groups themselves—are not being replaced by Native Americans.

As DOD's own Guidance for Strategic and Competitive Sourcing Programs points out, the use of a direct conversion is not required to be substituted in favor of a real public-private competition; in fact, the guidance indicates that even when using a direct conversion, the process can be modified to allow federal employees to compete in defense of their jobs as an MEO. However, after beginning and then abandoning an A–76 competition, as in the cases of MacDill and Kirtland, NIMA management is on the brink of executing a massive direct conversion—without even allowing agency employees to compete in defense of their jobs as an MEO.

Of course, it must be noted that direct conversions, whether to Native American tribes or traditional defense contractors, are unfair to federal employees who are denied opportunities to compete in defense of their jobs and poorly serve taxpayers.

Solution #4: Oppose the pending NIMA direct conversion and repeal the "Native American" direct conversion mechanism.

AFGE appreciates the bipartisan and bicameral group of lawmakers, including Senators Richard Durbin (D-IL) and Jean Carnahan (D-MO), who signed a letter of opposition to NIMA's direct conversion effort and asked Secretary of Defense Donald Rumsfeld to prevent the loophole from being used indiscriminately.

Problem #5: DOD has failed to look for savings from its massive and still ever-growing contractor workforce.

Mr. Chairman, AFGE has long believed that if savings were possible from competing the jobs of federal employees, then they were possible from competing the jobs of contractors as well. As you know, A–76 provides for insourcing as well as outsourcing.

The Clinton Administration agreed with us—or so we believed. A senior OMB official even committed to ensure that agencies, including DOD, undertook more contracting in. In a February 2, 1999, letter to me, Acting Deputy Director for Management G. Edward DeSeve wrote,

> "I also agree with you that we should ask federal managers to 'take pause' and consider the potential benefits of converting work from contract to in-house performance. As I indicated at our October meeting, OMB will encourage agencies to identify opportunities for the conversion of work from contract to in-house performance . . ."

No such guidance was ever offered. We were not deterred, however. Thanks to Senators Richard Durbin (D-IL) and Tom Harkin (D-IA) of this subcommittee, we secured the enactment of this report requirement:

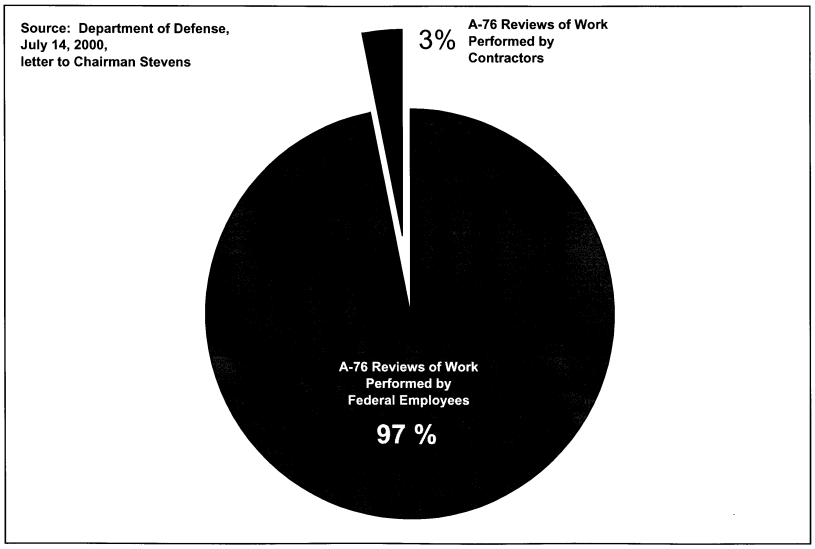
> "The Secretary of Defense shall submit a report to . . . identify those instances in which work performed by a contractor has been converted to performance by civilian or military employees of the Department of Defense . . . In addition, the report shall include recommendations for maximizing the possibility of effective public-private competition for work that has been contracted out."
>
> U.S. Congress, Fiscal Year 2000 Defense Appropriations Act, Section 8109.

The resulting report on DOD's contracting in activities—or, more precisely, the lack of contracting in activities—was hardly a surprise. DOD's compliance—or, more precisely, DOD's complete failure to comply—with the second requirement to develop a contracting in policy did cause me some surprise.

> "Eight of the 286 (OMB Circular A–76 public-private competition) studies (completed during the previous five years) involved work which was being performed by the private sector." (Note: Federal employees won five out of the eight studies.) "In responding to the Section 8109 requirement to present recommendations for maximizing the possibility of effective public-private competition for work that has been contracted out, the Department reiterated existing policy guidance on the subject."
>
> General Accounting Office, DOD Competitive Sourcing (01–20), December 2000.

At a time when the Pentagon is supposedly championing public-private competition, less than 3 percent of all A–76 studies performed by DOD were directed at work performed by contractors. (Please see Chart 4.) In other words, public-private competition is being used to replace federal employees with contractors, instead of to make DOD as a whole more efficient. Moreover, after being directed to come up with a plan for increasing its contracting in, the Pentagon thumbed it's collective nose at the Congress.

Percentage of DoD A-76 Reviews of Work Performed by Contractors



[Chart 4]

Solution #5: Require DOD to subject work performed by contractors to the same degree of public-private competition as that experienced by federal employees, starting with those categories of work that have been competed under A–76 over the last several years.

With respect to contracting in, it's illustrative to look at local government, using survey data collected by the International City/County Management Association.

> "Our data show significant incidence of reverse privatization or contracting back in previously privatized services . . . From 1992–1997, 88 percent of governments had contracted back in at least one service and 65 percent had contracted back in more than three services. On average across all places, 5 services were contracted back in from 1992 to 1997."
>
> Mildred Warner and Amir Hefetz, Privatization and the Market Structuring Role of Local Government, Cornell University Department of City and Regional Planning Working Paper #197, December 2000."

Why so much contracting in? The authors explain:

> "Contracting back in reflects problems with the contracting process itself, concerns over limited efficiency gains and maintenance of service quality . . . Analysis of cases of contracting back in shows that it is motivated by desire to maintain service quality and local control and to ensure cost savings in the face of changing markets."

Let's revisit the scene at DOD: The A–76 process is—at least at present—a money-loser. Contract administration is virtually nonexistent. Sole-source contractors have the department at their mercy. To engage in a bit of understatement, it's safe to write that conditions are ripe in DOD for the same sort of corrective contracting in that's occurring in local government.

What is the explanation as to why there is so much contracting in at the local level and so little at DOD, especially given the strong likelihood that there is much less private-private competition for DOD's work because of the much greater complexity of the work required and contract administration problems are so much more severe?

Here's the most likely explanation:

'Ideology does not dominate local service delivery decisions; rather, pragmatic local government demonstrate the continued importance of public investment, innovation and direct involvement in service delivery."

In other words, local officials want to do what's right for their communities. Can the same good intentions be attributed to those who have run DOD in recent years? I'll leave that for others to answer definitively. However, it is clear that DOD officials have approached contracting out and contracting in with certain prejudices.

Mr. Chairman, thank you for this opportunity to address the subcommittee. I would be happy to answer any questions.

Senator STEVENS. Mr. Peccei, you will be next.

Senator INOUYE [presiding]. The chair now recognizes Mr. Roberto Peccei, Vice Chancellor for Research at UCLA.

STATEMENT OF ROBERTO PECCEI, Ph.D., VICE CHANCELLOR FOR RESEARCH, UCLA, ON BEHALF OF ASSOCIATION OF AMERICAN UNIVERSITIES

Dr. PECCEI. Thank you very much, Mr. Chairman. Thank you for the opportunity to testify today. My name is Roberto Peccei and I am the Vice Chancellor for Research at University of California, Los Angeles (UCLA). My remarks today are submitted on behalf of the American Association of Universities, the National Association of State Universities and Land Grant Colleges, and the American Council on Education. These three associations include universities and colleges in every State that performs science and technology research that is funded by the Department of Defense.

I want to thank this subcommittee and you, Mr. Inouye, for the support you have shown for science and technology research programs in the Department of Defense. As you know, universities play the largest role in basic defense research, receiving more than 60 percent of the funding in program element 6.1. They also receive substantial funding for applied research and advanced technology development, program elements 6.2 and 6.3 respectively.

Many crucial defense technologies have emerged from fundamental research conducted on university campuses. Among these are radar, digital computers, lasers, the global positioning system, and computer networking. Indeed, ARPANet, the forerunner of the Internet, got its start at UCLA in 1969, more than 30 years ago.

With future threats to the national security so uncertain, maintaining technological superiority will require a strong, continuing research effort. DOD-sponsored university research is an important source of new knowledge and innovative solutions, ensuring preparedness. Indeed, incremental adaptation of existing weapons and equipment are not necessarily suitable in this new world situation.

For example, rapidly developing computer-based information technologies, coupled with advanced sensors, promise to revolutionize warfare. Research that now is being conducted on university campuses into new virtual reality and computer visualization technologies will permit future U.S. forces to dominate the situation with superior information and communications.

Supporting university research benefits DOD in many ways. It produces important advances in knowledge, it helps top scientists and engineers to remain involved in defense research. Not least, it produces a student who gets hands-on research training and eventually becomes the highly qualified scientists and engineers of the future who go on to work in academia and industry and in Federal laboratories.

For all these reasons, we hope that this subcommittee will continue the progress that has been made in the past few years to provide increased support for these programs, which make such an important contribution to national security. In fiscal year 2002, we hope the subcommittee will provide a combined total of $10 billion for science and technology programs under elements 6.1, 6.2, and 6.3. This will represent an increase of $900 million or approximately 10 percent over the fiscal year 2001 appropriation.

Thank you for permitting me to testify today. It will be a pleasure to welcome you or members of your staff to the UCLA campus so that you can see first-hand the exciting research being done with the support of the Department of Defense and this subcommittee.

Thank you very much.

[The statement follows:]

PREPARED STATEMENT OF ROBERTO PECCEI, PH.D.

Mr. Chairman and members of the subcommittee: Thank you for the opportunity to testify today. My name is Roberto Peccei, and I am the Vice Chancellor for Research at UCLA. My remarks today are submitted on behalf of the Association of American Universities (AAU), which includes 63 of North America's most prominent research universities. This testimony is also submitted on behalf of the National Association of State Universities and Land-Grant Colleges (NASULGC) and the American Council on Education (ACE). These three associations include universities and colleges in every state that perform the science and technology research that is funded by the Department of Defense.

I want to thank this subcommittee and you, Mr. Chairman, for the support that you have shown for science and technology research programs in the Department of Defense. As you know, Basic and Applied Research are funded under program elements 6.1 and 6.2 in the Research, Development, Testing and Evaluation section of the Department of Defense appropriation. The Army, Navy, Air Force and the "Defense-wide" account under the Office of the Secretary all receive separate appropriations for these programs. Universities play the largest role in basic defense research, receiving more than 60 percent of this funding (program element 6.1). They also receive substantial funding for applied defense research and advanced technology development (program elements 6.2 and 6.3, respectively).

Many crucial defense technologies have emerged from fundamental research conducted on university campuses. Among these are: radar, nuclear power, digital computers, semiconductor electronics, lasers, fiber optics, night vision, vaccines and drugs for malaria and other tropical diseases, inertial guidance, the Global Positioning System, stealth and other advanced materials, computer networking (ARPANet, forerunner of the Internet in fact got its start at UCLA more than 30 years ago), and computer-based visualization systems for training and for planning and conducting operations.

With future 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.

DOD-sponsored university research is an important source of new knowledge and innovative solutions to these problems. Incremental adaptations of existing weapons and equipment are not necessarily suitable in the new world situation. University researchers are investigating new approaches to assist likely future missions—for example, small, highly mobile units operating in ambiguous situations far from their bases.

Rapidly developing computer-based information technologies, coupled with advanced sensors, promise to revolutionize warfare. University scientists and engineers are working to exploit the information revolution faster and better than the rest of the world. Research now being conducted on campus into new visual reality and computer visualization technologies will permit future U.S. forces to dominate the situation with superior information and communications.

Supporting university research benefits DOD in many ways. It produces important advances in knowledge. It helps keep top scientists and engineers involved in defense research. Not least, the students who get hands-on research training become

the highly qualified scientists and engineers of the future who go on to work in academia, industry, and federal laboratories.

For all these reasons, we hope this subcommittee will continue the progress that has been made in the past few years to provide increased support for these programs which make such an important contribution to national security. In fiscal year 2002, we hope the subcommittee will provide a combined total of $10 billion for science and technology programs (6.1, 6.2 and 6.3) in the Office of the Secretary, Army, Navy and Air Force. This would represent an increase of $900 million (or 10 percent) over the fiscal year 2001 appropriation.

Thank you for permitting me to testify today. It would be a pleasure to welcome you or your staff to the UCLA campus so that you can see first-hand the exciting research being done with the support of the Department of Defense and this subcommittee.

Senator INOUYE. Thank you very much, Dr. Peccei. How many universities are involved in DOD research?

Dr. PECCEI. Well, the Association of American Universities (AAU) has 63 members. The National Association of State Universities and Land-Grant Colleges (NASULGC) has close to 200 members. Three hundred is the total number. They are in every State of the Union. What is particularly nice is that they involve a tremendous number of young students, both undergraduate and graduate students. Really, they help train the future generations.

Senator INOUYE. Thank you very much, Dr. Peccei.

Dr. PECCEI. Thank you.

Senator INOUYE. Now may I call upon Lieutenant Colonel Kevin Reagan, Ovarian Cancer National Alliance.

[No response.]

Senator INOUYE. Then may I call upon Mr. Robert V. Morris, Executive Director, Fort Des Moines Memorial Park and Education Center.

STATEMENT OF ROBERT V. MORRIS, EXECUTIVE DIRECTOR, FORT DES MOINES MEMORIAL PARK AND EDUCATION CENTER

Mr. MORRIS. Greetings, Senator Inouye. As you are aware, Fort Des Moines is a military installation with a great deal of distinction. It was the site of the first officer candidate school opened to African Americans in 1917 and the creation of the Women's Army Corps in 1942, including the first officer candidate school opened to females there as well. President Ronald Reagan received his commission there in 1937 and our former board member and currently Secretary of State General Powell is one who also believes that had it not been for the success of that 1917 officers candidate school it would have retarded the process of black officer development for 25 years and had an impact on the careers of officers like himself.

As you are aware, sir, we have received prior appropriations through the Army, the Corps of Engineers, which have done rehabilitation on the 20,000 square foot museum building there at the 4-acre park. Unfortunately, due to the rigid standards of rehabilitation by the Secretary of Interior's office, those funds literally are going to get us a shell, a building shell there, without much work being done internally.

The building has been closed since the Vietnam War where the museum is going and it took a great deal of work to bring it up. We are asking for a final appropriation to complete this project. In addition to the $12 million construction and development budget for the park, of which we have raised $3 million, we are also rais-

ing an $8 million endowment fund for the perpetual operations and maintenance of the park as well.

So the project is large. That is basically what we are asking for at this time.

[The statement follows:]

PREPARED STATEMENT OF ROBERT V. MORRIS

No military installation has played as great a role in the racial and gender integration of America's Armed Forces as Fort Des Moines, Iowa, a National Historic Site.

As you are aware, Fort Des Moines hosted the first U.S. Army Officer Candidate School open to African-Americans in 1917 during the First World War. The 639 graduate officers led the 92nd Division against Imperial Germany in WWI France in 1918 and fathered today's racially integrated officer corps.

In 1942, during the Second World War, Fort Des Moines hosted the first U.S. Army training facility open to women. The Womens Army Auxiliary Corps (WAAC), later renamed the Womens Army Corps (WAC), trained 72,000 female troops for non-combat duty between 1942–1945. In addition, the Army's first Officer Candidate School open to women graduated 436 female officers, including 39 black women, on 29 August 1942. WAAC/WAC service released 250,000 men for combat duty in Europe and the South Pacific.

Congress has previously appropriated $4 million which the Army has used for structure stabilization of the 20,000 square foot museum and 5,000 square foot Chapel buildings under the strict guidelines of the Secretary of Interior's "Standards of Rehabilitation." Unfortunately, the hazardous work and standard conformity have exhausted the prior funds and left internal building and landscape development incomplete. These funds must be appropriated as a grant through the Defense Department due to their limitations on new construction projects.

Although we have raised nearly $3 million in local public and private funds toward the $12 million project, this final $5 million appropriation will finish the park for all of America to see and learn from. With your help, the Fort Des Moines Memorial Park will become America's largest testament as to how the military led greater society towards racial and gender equality at two critical turning points in history.

Senator INOUYE. Thank you very much. Is the 92nd Division still associated with this?

Mr. MORRIS. The 92nd Division to my knowledge is not active at this time. I think after World War II it became a inactive division, because it was a segregated division up through World War II.

Senator INOUYE. I was attached to it.

Mr. MORRIS. Oh, really? My grandfather, as I believe you are aware, was one of the initial officer candidates and served with the 92nd in France and was wounded at the Battle of Metz. So I have a personal interest in this project and have been the leader of the project over the years.

Senator INOUYE. I will look into it, sir.

Mr. MORRIS. Thank you. I appreciate it.

Senator INOUYE. Thank you.

May I now call upon Dr. James Herriot, Vice President, Bios Group. Dr. Herriot.

STATEMENT OF JAMES W. HERRIOT, Ph.D., VICE PRESIDENT, BIOS GROUP, INCORPORATED

Dr. HERRIOT. In deference to the committee's short time this morning, I am going to read an abbreviated statement. You have a copy of the full statement for the record.

Senator INOUYE. It will be made part of the record, sir.

Dr. HERRIOT. Mr. Chairman and members of the Defense Appropriations Subcommittee, Senator Inouye: A powerful new science is

emerging which is changing the way that we operate our military, formulate our strategies, manage our logistics, and defend our Nation. This is the science of complexity.

A few hundred years ago, scientists told us where cannonballs would land. Now this new science of complexity is telling us where organizations will land or, more precisely, about the dynamics of large, complex organizations composed of millions of individual interacting parts. Like millions of ricochetting, colliding billiard balls, these parts may be biomolecules of a living cell, they may be drug runners and Coast Guard ships. They may even be fragments of intelligence data which, if pieced together swiftly enough, can help analysts foretell of a terrorist attack or an international financial crisis.

The important news is that complexity science has matured and turned the corner from pure science to real, valuable applications. What is complexity science? Let me give you an analogy to help here. Hundreds of years ago, the Masons built the cathedrals of Europe with an exquisitely fine-tuned body of intuitive rules for constructing these stone masterpieces. Nevertheless, occasionally the cathedrals fell down, and no one knew why.

Later came structural engineering, the science of building. Buildings did not fall down any more and, moreover, architects could better adapt to new materials. Fast forward to today, when we have amassed a fine-tuned body of intuitive rules for constructing organizations, logistical supply chains, military organizations, and intelligence systems. Nevertheless, sometimes our organizations fall down and we do not always know why.

Complexity science is the structural engineering organizations. Why complexity science now? The short answer is computers powerful enough to model and even engineer organizations. Where did complexity science come from? Los Alamos National Labs, as well as scientists like MacArthur Award-winning biologist Dr. Stuart Kaufman, a founder of the Santa Fe Institute, and our company, Bios Group, a leading complexity science company in the world.

I will close with some examples of projects using complexity science. We are building computational models of financial instability to anticipate international financial crises before they occur, like identifying the dry forest where a forest fire may later break out. For DARPA, we are constructing thousands of Sherlock Holmes-like software agents to sift through millions of often inconsistent intelligence data.

For the Joint Chiefs, we are building models of the drug flow from South America to Florida, a battlefield-like situation with both sides shifting strategies, often very quickly, looking for the most efficacious, robust and adaptable policies in the face of uncertainty for our side.

In conclusion, we would enjoy further briefing this committee and other government bodies on this new structural engineering of organizations, the science of complexity. Thank you, Mr. Chairman, Senator Inouye, and members of the committee.

[The statement follows:]

PREPARED STATEMENT OF JAMES W. HERRIOT, PH.D.

Mr. Chairman and members of the Defense Appropriations Subcommittee: A new powerful science is emerging which is changing the way we operate our military, formulate our strategies, manage our logistics, and defend our nation. This is the Science of Complexity. This change is underway now, as I will describe in some examples.

A few hundred years ago scientists told us where cannon balls would land. Now this new Science of Complexity is telling us where organizations will land—or more precisely about the dynamics of large complex organizations composed of millions of individual interacting parts—like millions of ricocheting, colliding billiard balls. These parts may be bio-molecules in a living cell. They may be soldiers, tanks, and airplanes in a complex field operation. These parts may be drug runners and Coast Guard ships. These parts may even be fragments of intelligence data which, if pieced together swiftly enough, can help analysts foretell of a terrorist attack or an international financial collapse.

The important news is that Complexity Science has matured, and turned the corner from academic pure science to real valuable applications.

What is Complexity Science? Perhaps this is best answered with an analogy. Several hundred years ago the Masons built the cathedrals of Europe. They had an exquisitely fine-tuned body of intuitive rules for constructing these stone masterpieces. Nevertheless, occasionally the cathedrals fell down, and no one knew why. Later, structural engineering came along: the science of building. Buildings didn't fall down anymore. Moreover, architects could be more innovative, designing more productive spaces and adapting to new materials like steel. Fast forward to today when we have amassed an impressively fine-tuned body of intuitive rules for constructing organizations, logistical supply chains, military operations, and intelligence data systems. Nevertheless, sometimes our organizations fall down. And we don't always know why.

Complexity Science is the "structural engineering" of organizations. Complexity Science contains the dynamics and rules for designing large organizations, financial systems, operations, intelligence systems, etc. And like the cathedral architects of the past, today's generals, officers, CEOs, and business managers can be more innovative, designing more productive, adaptable, robust organizations in uncertain environments. In military parlance, the human is in the loop—more than ever.

Why is Complexity Science coming to the fore now? The short answer is computers. To understand existing organizations, and to "engineer" new organizations, we model them—and to do that we need today's very powerful computers.

Where did Complexity Science come from? Los Alamos National Labs was a key birthplace of these ideas, as well as scientists like MacArthur Award winning biologist, Dr. Stuart Kauffman, a founder of the Santa Fe Institute and founder of our company, Bios Group, Inc.—the leading Complexity Science company in the world.

I will close with some examples of projects using Complexity Science. We have many business projects with companies like Procter & Gamble, Ford, United Airlines, etc. However, I will focus on three of our DOD projects.

We are building computational models of financial instability to look for signs of, and to anticipate, international financial crises before they occur. This is akin to identifying the dry forest where a forest fire might later break out.

For DARPA we are (and I am personally) working on a program called Evidence Marshalling. Here we are constructing a few—soon thousands—of Sherlock Holmes-like software agents to sift though millions of often-inconsistent intelligence facts looking for the best surviving hypotheses.

For the Joint Chiefs, we are building models of the drug flow from South America to Florida. This is a battlefield like situation with both sides shifting strategies, often very quickly. Here we are exploring what mathematicians call policy space, looking for the most efficacious, robust, and adaptable policies—for our side.

In conclusion, the Science of Complexity is emerging as the powerful new "structural engineering" of organizations, operations, and strategy. Although Complexity Science is relatively new, it promises radical changes. We are already employing it to build more productive, more cost-effective, more adaptable organizations, logistics, and intelligence.

We would enjoy the opportunity to further brief this committee and other government bodies on this new Science of Complexity, and on the many new opportunities this science opens up for our nation. Thank you Mr. Chairman and members of the committee.

Senator INOUYE. Do you have papers on this complexity science?

Dr. HERRIOT. Yes, I can give you papers.

Senator INOUYE. Confusing, but yet intriguing.

Dr. HERRIOT. How would we best get those to you?

Senator INOUYE. Just mail it to the U.S. Senate, Appropriations Committee.

Dr. HERRIOT. We will do that. Thank you.

Senator INOUYE. Thank you very much, sir.

May I now call upon the Deputy Director of the National Security and Foreign Relations Division, American Legion, Mr. Dennis Michael Duggan.

STATEMENT OF DENNIS MICHAEL DUGGAN, DEPUTY DIRECTOR, NATIONAL SECURITY-FOREIGN RELATIONS DIVISION, THE AMERICAN LEGION

Mr. DUGGAN. Good morning, Senator Inouye and members of the Appropriations Subcommittee on Defense. On behalf of the American Legion, we again would like to convey our sincere thanks and gratitude for this opportunity to present its views with regard to the fiscal year 2002 defense budget. Needless to say, I will be as brief as I can.

Like you, we in the Legion are anticipating the results of the Defense Department's strategy review and we hope it is completed in time to be considered in the fiscal year 2002 defense budget. We also believe a supplemental appropriations budget is needed to address a number of defense items, to include for example the defense health program, which has been critically underfunded over the past number of years.

Undoubtedly, a strategy review for the long term is certainly needed, but such a review we believe is not required for the immediate necessities, like military pay raises, military housing allowances, and of course the Montgomery GI Bill (MGIB). Our top priority at this time very frankly, sir, is funding military health care and military treatment facilities, as well as the TRICARE for Life program for Medicare-eligible military retirees.

Secondly, as mentioned, we do continue to push for the concurrent receipt of military retirement pay and veterans disability compensation, which has been a major injustice to disabled veterans and retirees over the years.

Finally, we also believe that the time has come and is overdue to eliminate the unfair automatic offset at age 62 of the military survivors benefits program with social security benefits for military survivors who are at that stage where they desperately can use that money.

Mr. Chairman, the Legion recommends that over the long term the following items be considered for implementation: One, continued improvement in military pay, health care, housing allowances, and housing, and of course, like we said, improved MGIB benefits.

Defense spending we believe as a percentage of gross domestic product needs to be maintained, we believe, on the order of at least 3 percent of gross domestic product, instead of the current 2.7 to 2.9 percent. Defense we feel has been underfunded in the last, actually the last 13 to 15 years.

The Quadrennial Defense Review, which will be reviewed this year and evaluated, needs to be completely evaluated at least from the standpoint that it has never provided the forces nor the capabilities and resources to fight two nearly simultaneous major re-

gional conflicts. Recognizably, that is being considered in the strategy review. The strategy-resource mismatch we hope, which has plagued past and current strategy, needs to be desperately eliminated.

Also, force modernization, to include the Army transformation program of General Shinseki, must continue to be, we believe, adequately funded.

Finally, as mentioned, the National Guard and Reserves need to be realistically manned, structured, equipped, and maintained at high readiness levels. We have been aware lately that I believe that it was a National Guard helicopter deadline rate has been reported in the vicinity of 60 percent. If that is true, we believe that is unacceptable and needs to be improved.

Senator Inouye, Senator Stevens, the armed forces owes you a debt of gratitude for all you have done for them over the years. The American Legion also would like to add its sincere gratitude to that. Thank you very much.

[The statement follows:]

PREPARED STATEMENT OF DENNIS M. DUGGAN

Mr. Chairman, The American Legion is grateful for the opportunity to present its views regarding defense appropriations for fiscal year (FY) 2002. The American Legion values your leadership in assessing and appropriating adequate funding for quality-of-life, readiness and modernization of the nation's armed forces. As history continues to demonstrate, it is important for Congress to meet its constitutional responsibilities to provide for the common defense in truly a highly uncertain world.

With the end of the Cold War, the clear and identifiable threat posed by easily identified foes no longer exists. Today America faces a myriad of threats and challenges that appear more perplexing, complex and difficult. Serious regional threats continue to plague freedom and democracy, especially in areas like the Balkans, North Korea, the People's Republic of China, Iraq and Iran. America now must confront the on-going proliferation of weapons of mass destruction and international terrorism posed by rogue nations and radical groups.

President Bush's total budget request for fiscal year 2002 totals over $1.98 trillion and allocates $310.5 billion for defense or only 15.6 percent for defense and well over 50 percent for social programs and entitlement spending. The fiscal year 2002 defense budget represents a $14.2 billion increase in defense spending over the current funding level, but it is still 40 percent below the 1985 Reagan budget that eventually led to the end of the Cold War. In 1990, America was spending 5.1 percent of the gross domestic product on defense. The proposed fiscal year 2002 defense budget of $310 billion only represents 2.7 percent of the GDP, less than before the 1941 Japanese attack on Pearl Harbor. Military manpower has been continually reduced from 2.17 million in 1987 to 1.37 million.

The nation needs to invest more money than the current Administration is requesting or projecting to spend in order to maintain credible military capabilities. The White House requested DOD to conduct a thorough review of the current two-war strategy, as well as military force structures and manpower for the long-term. The fiscal year 2002 defense budget request may be increased, but The American Legion is led to believe that the new Administration would not submit a fiscal year 2001 defense supplemental spending request until the review was completed. The American Legion believes there are numerous short-term improvements in quality-of-life concerns, military readiness and force modernization already identified that should be addressed immediately.

The President promises an increase of $5.7 billion in military quality-of-life benefits that include a 4.8 percent raise in pay and allowances, $400 million for military housing improvements, and $3.9 billion to fund military health care initiatives. The American Legion urges the Congress to increase the defense appropriations to meet these quality-of-life improvement promises. Granted, the Administration may need more time to develop budgets based on future strategic requirements, but additional time is not required to realize the need for funding health care, pay raises, housing, child care, education, and other family-based programs that demand immediate attention.

National Commander Ray Smith recently visited American troops in South Korea, as well as a number of installations throughout the United States. During these visits, he was able to see first hand the urgent, immediate need to address these real quality-of-life challenges faced by servicemembers and their families. The marked decline in quality-of-life issues for servicemembers, coupled with heightened operational tempos, plays a key role in the recurring recruitment and retention woes and should come as no surprise. The operational tempo and lengthy deployments must be reduced. Military pay must be on par with the competitive civilian sector. If other benefits, like health care improvements, commissaries, adequate quarters, quality child care, and improved school systems are ignored, it will only serve to further undermine efforts to recruit and retain the best this nation has to offer.

The American Legion has developed a new program to encourage Legionnaires and their families spend more quality time with today's military members and their families. During visits to active duty posts and National Guard armories, American Legion leaders heard soldiers tell of inadequate pay, housing problems, health care difficulties, and child care concerns.

MODERNIZATION

The very force projected from the build-up in the early 1980s is the one being worn out as a result of extensive operational deployments and inadequate funding. As former Secretary of Defense Schlesinger previously indicated before the House Armed Services Committee, the United States military continues to live off and wear out the "capital" of the Cold War. Modernizing and maintaining even today's smaller military forces takes the kind of sustained commitment and fiscal investment, in the future, that took place in the early 1980s. What this nation really cannot afford is another decade of declining defense budgets and shrinking military forces. If America is to remain a superpower able to promote and protect its global interests, it must be capable to project force with complete confidence, using state-of-the-arts weaponry, in a timely manner.

The American Legion believes no soldier, sailor, aviator or Marine should go into battle without the very best training, equipment and weaponry available to win the war. No enemy should ever have a technological edge over US forces. To achieve this objective, Defense modernization efforts must remain a top priority of the Administration and Congress.

READINESS

In recent years, over-optimistic assumptions about actual funding requirements, coupled with multiple unbudgeted contingency operations, have resulted in a series of unit readiness problems. Training goals are not being met. Military readiness ratings have plunged due to reductions in operations and maintenance accounts as a result of extended peacekeeping operations. Both the 1st Infantry Division and the 10th Mountain Division felt the adverse consequences of peacekeeping operations on combat readiness. Recently, the 3rd Infantry Division was rated as less than combat-ready due to lack of combat-oriented training and personnel. Today, thousands of military personnel (both active and Reserve components) are deployed to about 140 countries around the globe. At any given time, 26 percent of the active-duty military force is deployed to overseas commitments. Members of the armed forces have little opportunity to spend meaningful time with their families. Junior officers are leaving the military in large numbers. Maintenance of equipment and weapon delivery systems is in peril because of limited spare parts inventories. Due to depleted supplies of parts, the cannibalization of parts and creative engineering has become a common practice. Manpower shortages have resulted in ships cross-decking or borrowing of crewmembers from other ships in order to deploy. Such back-to-back tours adversely impact crew integrity, morale, and readiness. Hands-on training, actual flying hours, and ammunition are being restricted based on available funding. When proficiency cannot be maintained, readiness is compromised and this places the nation's ability to wage high intensity conflict at risk.

QUADRENNIAL DEFENSE REVIEW

Since the collapse of the Soviet Union in 1991, America has conducted three substantial assessments of its strategy and force structures necessary to meet the national defense requirements. The assessment by the former President Bush Administration ("Base Force" assessment) and the assessment by the former President Clinton Administration ("Bottom-Up Review") were intended to reassess the force structure in light of the changing realities of the post-Cold War world. Both assessments served an important purpose in focusing attention on the need to reevaluate

America's military posture; but the pace of global change necessitated 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: Maintain 12 Army combat divisions, 12 Navy aircraft carrier battle groups, 15 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 theory behind the two-war strategy: if America were drawn into a war with one regional aggressor, another could be tempted to attack its neighbor. Especially, if this aggressor were convinced that America and its allies were distracted, lacked the will to fight conflicts on two fronts, or did not possess the military power to deal with more than one major conflict at a time. Determining the right size of United States forces for more than one major conflict would provide a hedge against the possibility that a future adversary might mount a larger than expected threat. It would also allow for a credible overseas presence that is essential in dealing with potential regional dangers and pursuing new opportunities to advance stability and peace. The American Legion believes such a strategy, however, should be threat-based rather than budget-driven.

Furthermore, the strategy must employ more robust force structures and increased budgeting for quality-of-life, readiness and modernization than that recommended in the Bottom-Up Review or its follow-on Quadrennial Defense Review (QDR). The American Legion believes that the two-war strategy has not been adequately funded. The American Legion believes the "win-win" two-war Bottom-Up Review strategy was delusional. With growing worldwide commitments, America has a "win-hold" strategy, at best, with only 10 Army combat divisions and three Marine divisions to utilize.

Peacekeeping and humanitarian operations, that do not serve vital national security interests, further detract from America's combat power and military readiness. Funding for peacekeeping operations must be congressionally approved, on a case-by-case basis, and fully appropriated by Congress rather than funded through the Services' limited operations and maintenance accounts. America expects its civilian and military leadership to develop a reasonable and common sense national military strategy. If all other reasonable alternatives are explored, United States forces must only be committed in response to threats against America's vital interests.

The current national security and military strategies prescribed in the QDR fail to match increased military missions with the required resources. The QDR, like the Bottom-Up-Review, provides neither the forces, lift capabilities, nor budgets to fight two nearly simultaneous major regional conflicts and win. Peacekeeping operations fail to properly train combat forces to win wars. Congress and DOD need to provide a strategy that better matches missions with resources.

PROCUREMENT

Only a few major systems currently in production would be funded in the fiscal year 2002 defense budget. The funding level for weapons procurement is one of the lowest of any Administration, since 1950 and has been some 71 percent less than that of 1985. The American Legion fully supports the Army's Transformation Program. Major development programs that The American Legion also 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 more DDG–51 destroyers. Unquestionably, the Navy will also need to acquire more submarines.

If left unadvised, omissions in DOD's modernization budget could have the following implications:

—They will result in the continued deterioration of the defense industrial base.
—The future technological superiority of American forces will be at risk thereby increasing the danger to servicemembers 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.

The American Legion further urges 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 opposes further termination or curtailing of essential service modernization programs, diminution of defense industrial capabilities, and rejects the transfers of critical defense technologies abroad.

The American Legion firmly believes with the continuing threat of nuclear proliferation, America should retain its edge in nuclear capabilities as represented by

the TRIAD system, and the highest priority should be the deployment of a national missile defense. Although the development and deployment of advanced theater missile defenses to protect United States forward deployed forces is imperative; any dismantling of acquisition programs to defend the American people is imprudent. America should focus on developing and deploying by 2003 an anti-ballistic missile detection and interception system that is capable of providing a highly effective defense against limited attacks of ballistic missiles.

ACTIVE FORCE PERSONNEL

The American Legion is deeply concerned that a number of influences pose significant—and often underestimated—recruitment, retention and readiness risks for the remainder of the decade.

Mr. Chairman, The American Legion and the armed forces owe you and this Subcommittee a debt of gratitude for your strong support of military quality-of-life issues. Nevertheless, your 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 continue to endure physical risks to their well being and livelihood, substandard living conditions, and forfeiture of personal freedoms that most Americans would find unacceptable. Worldwide deployments have increased significantly, and a smaller force has operated under a higher ops tempo with longer work hours and increased family separations.

Now is the time to look to the force recruiting and retention needs. Positive congressional action is needed to overcome past years of negative career messages and to address the following quality-of-life features:

—*Closing the Military Pay Gap With the Private Sector.*—The Chairman of the Joint Chiefs of Staff previously stated 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 Members of Congress 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 took its toll and military pay continues to lag behind the private sector by about ten percent. The American Legion applauds the 3.7 percent pay raise effective on January 1, 2001 and E–5, E–6 and E–7 grade-adjustments to pay to be made in July 2001. With the new Administration pledging to significantly increase military pay raises above that dictated by the "ECI plus one-half of one percent," there is excitement in the field. We urge you to support the new Administration's plan.

—*Basic Allowance for Housing (BAH).*—For those who must live off base, the provision of the Basic Allowance for Housing (BAH) is intended to help with their out-of-pocket housing expenses. Former Secretary of Defense Cohen set a goal of entirely eliminating average out-of-pocket housing expenses. However, at this time it has been estimated that BAH only accounts for about 70 percent of out-of-pocket housing costs. This committee has taken strong steps in recent times to provide funding to move toward lowering such expenses. Please continue to work to close the gap between BAH and the member's average housing costs.

—*Montgomery G.I. Bill Enhancements (MGIB).*—The current veterans' educational benefit, the Montgomery GI Bill, has failed to keep pace with escalating educational costs and is significantly diminished in relation to the unique educational benefits offered in the original GI Bill. Today's military educational benefits package directly competes with other federally funded educational programs, such as AmeriCorp, Pell Grants and others that offer equal or greater monetary benefits with less personal sacrifice and hardships. The American Legion believes that the veterans' educational benefits package for the 21st Century must be designed to recruit outstanding individuals to meet the needs of the armed forces and to serve as a successful transition instrument from military service back into the civilian workforce.

RESERVE COMPONENTS

The advent of smaller active duty forces reinforces the need to retain combat-ready National Guard and Reserve Forces that are completely integrated into the Total Force. The readiness of National Guard and Reserve combat units to deploy to a second major regional conflict will also cost in terms of human lives unless Congress is completely willing to pay the price for their readiness. With only ten active Army divisions in its inventory, America needs to retain the eight National Guard divisions as its life insurance policy.

Growing concerns are that the Reserve Components, especially the National Guard, should not be overused in contingency operations, as these servicemembers have regular civilian jobs and families as well. The American Legion understands that retention rates and, therefore, strength levels are falling in those States deployed or scheduled to deploy Guardsmen overseas. Governors of these states continue to express concern that state missions will not be accomplished. The National Guard from 44 States has a presence in 35 foreign countries.

The American Legion is also supportive of all proposed quality-of-life initiatives that serve to improve living and working conditions of members of the Reserve components and their families, to include unlimited access to commissaries.

QUALITY-OF-LIFE

Just as military manpower levels, force structures, operational tempos and defense budgets need to be stabilized, so must quality-of-life features for servicemembers and their families. This includes enhancements to compensation and incentives to preclude seriously degrading the All-Volunteer Force. The American Legion believes that the most important message is to sustain the momentum begun in the 106th Congress:

—Military pay raises;
—improved housing;
—access to quality health care;
—family support activities for the active duty and Reserve components;
—TRICARE for Life for Medicare-eligible military retirees;
—full concurrent receipt of military retirement pay and veterans disability compensation; and,
—improved Survivors Benefit Plan (SBP) benefits for Social Security eligible surviving spouses of military retirees.

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 a major concern among military retirees. Until recently, military retirees were led to believe that they were entitled to free lifetime health care—after having served 20 or more years in the most demanding and dangerous of professions. The promise, of lifetime health care was perpetuated in military recruitment literature as recently as 1993.

The creation of "TRICARE for Life" and a TRICARE Senior Pharmacy benefit in Public Law 106–398 was an historic triumph for Congress and those 1.4 million Medicare-eligible military retirees and dependents. While TRICARE for Life came with its own funding stream in fiscal year 2001, money must be budgeted to provide for the program for fiscal year 2002. The American Legion recommends that you make this important program a reality by providing the funding to start the program. The American Legion also applauds your work last year to eliminate TRICARE co-payments for active duty family members. However, several other important measures signed into law are on hold due to lack of funding. These include extending the TRICARE Prime Remote program to family members; lowering the TRICARE Standard catastrophic cap (maximum out-of-pocket expenses per fiscal year) from $7,500 to $3,000; providing TRICARE coverage for school physicals for dependents; and reimbursement for certain travel expenses for TRICARE Prime beneficiaries. The American Legion recommends this committee to make these important programs work by providing appropriations to get the job done. The American Legion recommends that this Subcommittee take the next step to make sure that the new military health care improvements come to fruition.

Beginning October 1, 2002, TRICARE for Life (TFL) will be fully funded through the Medicare-eligible Retiree Health Care Fund. But TFL actually will be implemented one year earlier—on October 1, 2001. This first-year funding requires an increase in appropriated defense funds over and above the normal defense budget amount. TFL will be funded in any event, but without the added money, the Pentagon would have to pay for it by "robbing" other needed DOD programs. Providing the full added TFL funds sends a powerful signal that Congress intends to honor the lifetime health care commitment to older servicemembers without cutting funds for other needed readiness or quality-of-life programs. The American Legion is grateful for Senator Domenici's strong leadership in proposing to fully fund military health care.

The American Legion recommends an additional $1.4 billion be added to the Defense Health Program to meet health benefit obligations to military beneficiaries for the current fiscal year. This program has been chronically under-funded for years.

The American Legion appreciates the significant military health care enhancements enacted in the fiscal year 2001 Floyd D. Spence National Defense Authorization Act. The American Legion recommends that Congress reiterate its commitment to authorize and appropriate sufficient funds for these improvements within DOD's Health Program, and further, to direct the Health Care Finance Administration (HCFA) to reimburse DOD for its care of Medicare-eligible military families at Military Treatment Facilities (MTFs).

The Military Health System (MHS) is chronically under-funded, resulting in execution shortfalls, lack of adequate equipment capitalization, failure to invest in infrastructure and slow reimbursement to managed care support contractors. For a number of years, MHS has been forced to rely on emergency supplemental appropriations or the reprogramming of funds within DOD.

The military's health care program is one of the most important benefits afforded the men and women who serve in or have retired from the uniformed services. The promise of free health care in military treatment facilities (MTFs) was a major selling point in the military's recruiter's and career counselor's pitch to enlist or retain personnel in the uniformed services.

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 convinced them to serve are not kept, the retention rate in the current active-duty force will undoubtedly be affected. The old adage you enlist a recruit, but you reenlist a family is truer today than ever as more career-oriented servicemembers are married or have dependents.

Accordingly, The American Legion believes Congress and the Administration must place high priority on ensuring that these long-standing commitments are honored:

—*VA Compensation Offset to Military Retired Pay (Retired Pay Restoration).*—Under current law, a military retiree with compensable, VA disabilities cannot receive both military retirement pay and VA disability compensation. The military retiree's retirement pay is offset (dollar-for-dollar) by the amount of VA disability compensation awarded.

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. A veteran's disability compensation is paid to a veteran who is disabled by injury or disease incurred or aggravated during active-duty military service. 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. Action should be taken this year to provide full compensation for those military retirees who served more than 20 years in uniform and incurred service-connected disabilities. Disabled military retirees are the only retirees who pay their own disability compensation from their retirement pay. It is time to cease this inequitable practice. The American Legion supports funding to provide full concurrent receipt to all eligible disabled 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 for military survivors. 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.

—*Uniformed Services Former Spouses Protection Act (USFSPA).*—The American Legion urges support for amending language to Public Law 97–252, the Uniformed Services Former Spouses Protection Act. This law continues to unfairly

penalize active-duty armed forces members and military retirees. USFSPA has created an even larger class of victims than the former spouses it was designed to assist, namely remarried active-duty servicemembers or military retirees and their new family. The American Legion believes this law should be rescinded in its entirety, but as an absolute minimum, the provision for a lifetime annuity to former spouses should be terminated upon their remarriage.

CONCLUSION

Twenty-eight years ago America opted for an all-volunteer force to provide for the national security. Inherent in that commitment was a willingness to invest the needed resources to bring into existence a competent, professional, and well-equipped military. Now is not the time to dismantle, through the consequences of under-funding national defense, but rather to fully support the all-volunteer force.

What needs to be done? The American Legion recommends, as a minimum, that the following steps be implemented:

—Continued improvements in military pay raises, equitable increases in Basic Allowances for Housing and Subsistence, military health care, improved educational benefits under the Montgomery G.I. Bill, improved access to quality child care, and other quality-of-life issues.

—Defense spending, as a percentage of Gross Domestic Product needs to be maintained between 3 and 4 percent annually. At least $160 billion should be appropriated over six years to address the immediate concerns of the Joint Chiefs of Staff.

—The Quadrennial Defense Review needs to be fully reevaluated as it provides neither the forces nor the defense budgets to fight two nearly simultaneous major regional conflicts, while also conducting peacekeeping operations. The strategy-resources mismatch needs to be eliminated.

—Force modernization needs to be realistically funded and not further delayed or America is likely to unnecessarily risk many lives in the years ahead;

—The National Guard and Reserves must be realistically manned, structured, equipped and trained; fully deployable; and maintained at high readiness levels in order to accomplish their indispensable roles and missions.

Mr. Chairman, this concludes The American Legion statement.

Senator INOUYE. Mr. Duggan, the chairman and I are both members of the American Legion and as such you can be assured we will look at your statement very carefully, sir.

Mr. DUGGAN. Thank you, sir.

Senator INOUYE. May I now call upon Commander Mike Lord, Co-Chair of the Military Coalition Health Care Committee. Commander Lord.

STATEMENT OF MIKE LORD, COMMANDER, U.S. NAVY [RETIRED], CO-CHAIR, THE MILITARY COALITION HEALTH CARE COMMITTEE

Mr. LORD. Good morning, Senator Inouye. In a classic example of actions speaking louder than words, last year's Congress proclaimed in the most effective way possible that it really does put people first and it did indeed view the fulfillment of the lifetime health care commitment as a top priority. The Congress responded to a situation that needed a solution in a way that exceeded the hopes of even the most optimistic among us. On behalf of our grateful beneficiaries, we say thank you. You have really made a difference.

While the Military Coalition is optimistic that the solution has been identified, we cannot ignore the storm clouds on the horizon. Just as last year's legislation has given us much to be grateful for, it has also presented a major challenge. It is a simple fact that the provision of health care does not come without cost and it is the issue of funding the benefit that has us most concerned.

Along with the reality of rising health care costs is the long history of funding problems experienced by the military health sys-

tem. As you well know, Senator Inouye, the Military Health System (MHS) has for the last two decades been plagued with annual budget underestimations that have left significant portions of the program underfunded. This year is no exception as DOD faces a reported $1.4 billion shortfall in the defense health program for the current fiscal year.

The consolidated defense health program (DHP), in existence since 1993, has experienced shortfalls requiring supplemental funding every year since it was created. The understated budgets have often been addressed by reprogramming funds from the military departments, supplemental appropriations from Congress, or internal adjustments to the DHP, and all of this before the introduction of an additional 1.5 million Medicare-eligible beneficiaries.

Because the health benefit is so crucial, it cannot be allowed to founder because of lack of funding. It is our hope that the over 65 provisions enacted by Congress will serve as a much-needed reminder that quality health care comes at a cost and will finally force the parties to accept the reality that the cost must be identified accurately, up front, and funded completely.

Senator Inouye, we have addressed a few additional funding-related items in our written testimony. These include some additional health care matters and funding issues related to personnel and compensation. In the interest of time, I will not go into detail here, but I urge you to consider those matters as well.

Finally, Senator Inouye, I would like to conclude by observing that last year the 106th Congress did the right thing by fulfilling health care commitments made long ago and provided a clear definition for the scope of the health care benefit, that being TRICARE for Life. As this committee indicated last year, the benefit needed to be defined so this committee could fund it. Now that it has been defined, we urge you to ensure that it is adequately funded, to see to it that the benefit is delivered as promised to all DOD beneficiaries.

Thank you, Senator Inouye.

[The statement follows:]

PREPARED STATEMENT OF MIKE LORD

On behalf of The Military Coalition, a consortium of nationally-prominent uniformed services and veterans organizations, we are grateful to the Subcommittee for this opportunity to express our views concerning issues affecting the uniformed services community. This testimony provides the collective views of the following military and veterans organizations, which represent approximately 5.5 million current and former members of the seven uniformed services, 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
—Non Commissioned Officers Association
—Reserve Officers Association
—The Retired Enlisted Association
—The Retired Officers Association
—The Society of Medical Consultants to the Armed Forces
—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

The Military Coalition, Inc., does not receive any grants or contracts from the federal government.

INTRODUCTION

The Military Coalition (TMC) wishes to express its deepest appreciation to this Subcommittee for its extraordinary efforts to address shortfalls in military personnel and health care budgets, fulfill obligations to active and retired servicemembers, families and survivors, and sustain recruiting and retention that is so essential to military readiness.

This testimony summarizes the Coalition's recommendations for funding needs in these areas for fiscal year 2002.

HEALTH CARE ISSUES

Provide Adequate Funding For The Defense Health Budget

One of the Coalition's top priorities for fiscal year 2002 is to ensure adequate funding of the Defense Health Budget: to meet readiness needs, to include full funding of TRICARE, and to provide access to the military health care system for ALL uniformed services beneficiaries, regardless of age, status or location. The Coalition believes that an adequately funded health care benefit is as critical to the retention of qualified uniformed services personnel and to readiness as are pay and other benefits. As the Commandant of the U.S. Marine Corps underscored at the annual TRICARE Conference on Jan. 22, 2001, "Medical care is a key component of military readiness . . . TRICARE influences the intangibles of military readiness, such as morale, the will to fight and dedication to duty . . . Our men and women perform their daily tasks better if not distracted by worries concerning their families."

The Military Health System (MHS) budget has been chronically underfunded, resulting in execution shortfalls, lack of adequate equipment capitalization, failure to invest in infrastructure, and slow reimbursement to Managed Care Support Contractors. Each year, the MHS has had to rely upon Congress to supply emergency supplemental funding. The Coalition has serious concerns about the funding shortfall that has become apparent again this year in the execution of the Defense Health Program (DHP) budget for fiscal year 2001.

Service health officials indicate an additional $1.4 billion is essential to meet program needs for the remainder of fiscal year 2001, including the April 1 implementation of pharmacy benefits for Medicare-eligibles. If funding is not forthcoming soon, the Service Surgeons General have testified they face furloughs, limitations of pharmacy formularies, and extended deferral of equipment maintenance and repairs. Meanwhile, important benefit upgrades supposed to have been effective last October have had to be deferred, including a lower limit on retiree out-of-pocket health expenses, waiver of charges for military families assigned to remote areas, and reimbursement for school physicals for servicemembers' children. This shortfall threatens day-to-day health care operations, has delayed implementation of newly authorized programs, and threatens essential preparations for the October 1, 2001 implementation of the new TRICARE For Life (TFL) coverage that is so important to older military retirees.

As the Subcommittee is aware, TFL will be funded through a DOD Medicare-eligible Retiree Health Care Fund beginning October 1, 2002. However, because the statutory effective date for TFL is one year earlier—Oct. 1, 2001—DOD will require an

increase in appropriated funds over and above the current fiscal year 2002 defense budget topline if TFL is to reach its full potential, without forcing DOD to absorb its costs "out-of-hide." fiscal year 2002 is the landmark year for TFL, and adequately funding the health care budget is the cornerstone for assuring the program is launched successfully. Doing so will eliminate any uncertainty and send a powerful signal to all service beneficiaries that Congress is resolved to make TFL a reality.

In years past, the funding problem was tied to some degree to the lack of a clearly defined benefit. Uncertain of the benefit, it was difficult to identify the level of funding necessary to fully support the Defense Health Program. With the introduction of TFL, the benefit is defined and funding requirements should now be understood. The Coalition urges the subcommittee to make it a defense imperative to provide funds that meet the actual costs for providing health care to military retirees, active duty service personnel and their families, and to end the practice of relying on annual supplemental funding to meet budget shortfalls.

The Military Coalition strongly recommends this Subcommittee appropriate sufficient funds to fully finance the Defense Health Program, to include military medical readiness, TRICARE and the DOD peacetime health care mission, full funding for TFL and to address the $1.4 billion execution shortfall for fiscal year 2001.

Legislative Adjustments to TFL

Inpatient Hospitalization and Skilled Nursing facility (SNF) Care.—Based on the experience of The Retired Officers Association (TROA), regarding hospital stays beyond the Medicare maximum of 150 days, DOD would save only about $150,000 per year by requiring the beneficiaries to pay the $3,000 TRICARE catastrophic cap, before TRICARE assumes 100 percent of the cost. [This estimate was derived by extrapolating the experience of TROA (where 5 of 150,000 insured beneficiaries exceeded the 150 day Medicare limit in one year) to the entire 1.4 million Medicare-eligible service beneficiary population.] Similarly, DOD would save only about $930,000 per year by requiring beneficiaries to pay the $3,000 catastrophic cap before TRICARE assumes 100 percent of the cost of SNF care beyond the Medicare 100-day maximum. [This estimate was also derived by extrapolating the TROA experience (31 of 150,000 beneficiaries exceeded the Medicare 100-day limit) to 1.4 million potential TFL participants.] These relatively rare experiences are highlighted by TFL skeptics as examples of how TFL falls short of Standard Medicare Supplemental Plan F coverage. The Coalition believes strongly that extending full TFL coverage, when hospital and SNF stays exceed the Medicare maximums, offers administrative and public relations benefits that far exceed the tiny dollar savings that would be foregone.

The Military Coalition recommends authorization and the modest necessary funding to permit TFL to assume 100 percent of the costs for service beneficiaries who incur hospital stays that exceed the Medicare maximum (90 days plus 60-day lifetime reserve) and SNF stays that exceed the 100-day Medicare maximum.

Private contracts.—In some areas of the country, particularly rural areas that are medically underserved, beneficiaries are unable to locate providers who accept Medicare for certain specialized services and may have to enter into "private contracts." There are also instances where a beneficiary may be forced to enter into a private contract because some medical practices have exceeded capacity and are unable to see additional Medicare patients. Under current policy, beneficiaries in these situations are liable for 100 percent of the costs. Conversely, in these circumstances, individuals enrolled in the Federal Employees Health Benefits Program (FEHBP) do not encounter the same degree of out-of-pocket costs, because FEHBP pays the copayments it would have paid if Medicare were first payer.

The Military Coalition recommends that this Subcommittee support authority and modest funding necessary to permit TFL to make partial payments for individuals who enter into private contracts with non-Medicare providers, on the same basis as FEHBP.

Dual Eligible DOD–VA Beneficiaries

The Coalition was disappointed to learn that the President's budget envisions seeking legislation to force DOD beneficiaries, who are also eligible for Veterans Administration (VA) medical care, to enroll with only one of these agencies as their sole source of health care. It is the Coalition's view that this policy change will be viewed as a serious breach of faith.

The VA health system delivers specialized care and services for members with significant disabilities (e.g., prosthetics and treatment of spinal injuries) that are difficult if not impossible to duplicate in military facilities. But their needs for such specialized care for service-connected disabilities should not be turned to their disadvantage—either to compel them to get all their care from the VA, or to deny them

specialized VA care if they choose routine care for themselves and their families through TRICARE.

We acknowledge that a critical, but not insurmountable, challenge for Congress, DOD, and VA will be to implement a suitable policy framework under which these beneficiaries will be able to access the health care they have earned. Retired veterans with VA-rated disabilities are entitled to VA health care and, as a matter of principle, should not be required to choose between VA health care and TFL. These service-connected disabled veterans have earned the right to military health care in return for their careers of service in uniform. They also have earned access to specialized VA care for the (often severe) disabilities that their service has imposed on them.

The Coalition strongly recommends that the Subcommittee provide support and funding to ensure disabled military retirees are not forced out of either the VA health care or the DOD health care options they have earned by their career service and personal sacrifices.

Improvements In Tricare

The Coalition is pleased that the fiscal year 2001 NDAA addressed some of the more egregious problems with TRICARE, and thanks the Subcommittee for its support in funding provisions to enhance TRICARE delivery/effectiveness via:

—Modernization of TRICARE business practices by implementing an internet-based system to simplify and make accessible critical administrative processes;
—Improvements in claims processing, to include use of the TRICARE encounter data information system; reducing administrative delays, and increasing use of electronic claims processing; and
—Increased reimbursements in certain localities where access to health care services is at risk.
—While Congress has previously given the authority to the Secretary of Defense to increase reimbursements and mandated improvements in TRICARE business practices, the Coalition continues to hear countless accounts from TRICARE Standard beneficiaries who are frustrated with the lack of provider participation in the program. While current and previous mandates are greatly appreciated, we have yet to see a significant impact as beneficiaries attempt to seek access from providers who will not accept TRICARE patients; or require payment up front because they refuse to accept TRICARE reimbursement rates administrative requirements.

Once providers have left the system, promises of increased efficiencies have done little to encourage them to return to the system to care for our beneficiaries.

The Military Coalition recommends that the Subcommittee continue monitoring provider participation problems and support additional actions as necessary to resolve these issues.

TRICARE Prime Equity Innovations

The Coalition is grateful that Congress provided authority and funding to eliminate copayments for active duty family members (ADFMs) enrolled in TRICARE Prime. This initiative removed financial burdens for those who were only able to access care through civilian providers. The Coalition was delighted by the restoration of the TRICARE Prime benefit for families of servicemembers assigned to remote areas where there is no TRICARE Prime option. These families were unfairly burdened by having to pay much higher copayments for care than their counterparts assigned to areas where they had the opportunity to enroll in TRICARE Prime.

Fiscal year 2001 is a watershed year for military beneficiaries. However, the great strides made to improve benefits for ADFMs and Medicare-eligible beneficiaries have made apparent the continued shortcomings of the TRICARE system for retirees under 65. Many of these beneficiaries live in areas not serviced by Prime, thus relying on the more expensive Standard benefit. Because many live in rural or metropolitan areas that are medically underserved, they continue to inform us that they are having difficulty in locating TRICARE participating providers. This presents a dilemma for members who have no choice but to rely on providers who demand their fees "up front" at the time of service. Obviously, this places an undue financial burden upon these deserving beneficiaries. In the light of the benefit enhancements provided to the over 65 retirees (TFL) and the ADFM, it is apparent that the needs of the under 65 retirees are not being met by the current TRICARE system. The Coalition believes that one viable option would be to extend TRICARE Prime Remote to TRICARE-eligible retirees, their family members and survivors at the same locations where the program is established for ADFMs.

The Military Coalition strongly recommends that the Subcommittee work with the Armed Services Committee to authorize and appropriate sufficient funds to ensure

that TRICARE Prime Remote be extended to retirees, their family members and survivors at the same locations where it is established for active duty family members.

Travel Reimbursement for Prime Beneficiaries

The Coalition also appreciates Congress's action to reduce the financial burden for TRICARE Prime beneficiaries in areas where specialty care is not available. Previously, Prime enrollees were forced to travel great distances from their MTFs to distant specialty centers at personal expense. A provision in the fiscal year 2001 NDAA authorizes TRICARE to cover the expenses of Prime enrollees who have to travel more than 100 miles to get specialty care will greatly reduce this burden. However, a further refinement is necessary to achieve the desired result. If the patient is a minor child, who must or should be accompanied by a parent or guardian, there is no authority to reimburse that accompanying individual.

The Military Coalition recommends that the Subcommittee support authority and funding to permit travel reimbursement for a parent or guardian of a minor when they accompany the minor to distant specialty centers.

Custodial Care

Once again, the Coalition is particularly grateful that Congress has provided a definition of Custodial Care for military beneficiaries that meets industry standards to provide medically necessary care, and provided funding for this purpose. While the requirement still has not been fully implemented across all TRICARE Regions, it is slowly being put into place. Without Congress' intervention, DOD would have maintained its "unique" definition of medically necessary care for beneficiaries considered as custodial patients. The result would have meant cost shifting to Medicaid, loss of medically necessary care for the most vulnerable of the DOD beneficiary population, or both.

We urge continued oversight by Congress to monitor the implementation of the new case management program mandated by Public Law 106–65, the Individual Case Management Program for Persons with Extraordinary Conditions (ICMP–PEC). The Coalition is eager to learn the results of the study mandated in Public Law 106–65, Sec. 703 due March 31, 2000 to determine how other health plans provide care to custodial patients.

The Coalition is aware that TFL will make an additional 1.4 million beneficiaries eligible for TRICARE. The Coalition is aware of the potential impact these new beneficiaries will have upon the DHS and recognizes that some among this population, which is at the greatest risk for poor health, will be eligible for the ICMP–PEC. However, the Coalition is concerned that the current program has been developed in an incremental and piecemeal fashion and is poorly understood by providers and beneficiaries. In light of the implementation issues concerning the under 65 population in ICMP–PEC, the Coalition urges Congress to instruct DOD to develop a program, in concert with representatives from advocacy groups, that is equitable to all beneficiaries.

The Military Coalition recommends that Congress provide continued oversight to further define what medically necessary care will be provided to all Custodial Care beneficiaries; and that Congress direct a study to determine how TFL beneficiaries will be integrated into ICMP–PEC in an equitable manner; and that Beneficiary Advisory Groups' inputs be sought in the integration of TFL beneficiaries into the ICMP–PEC. Coordination of Benefits and the 115 percent Billing Limit Under TRICARE Standard

In 1995, DOD unilaterally and arbitrarily changed its policy on the 115 percent billing limit in cases of third party insurance. The new policy shifted from a "coordination of benefits" methodology (the standard for FEHBP and other quality health insurance programs in the private sector) to a "benefits-less-benefits" approach that unfairly transferred significant costs to servicemembers, their families and survivors. Regrettably, this insensitive policy change also currently applies to disabled beneficiaries under 65 for whom Medicare is first payer and for whom Congress contemplated TRICARE would act as second payer to Medicare under the "coordination of benefits" methodology.

Here is TRICARE's Catch 22. Although providers may charge any amount for a particular service, TRICARE only recognizes amounts up to 115 percent of the TRICARE "allowable charge" for a given procedure. Under DOD's previous, pre-1995 policy, any third party insurer would pay first, then TRICARE (formerly CHAMPUS) would pay any balance up to what it would have paid as first payer (75 percent of the allowable charge for retirees; 80 percent for active duty dependents).

Under its post-1994 policy, TRICARE will not pay anything at all if the beneficiary's other health insurance (OHI) pays an amount equal to or higher than the 115 percent billing limit. (Example: a physician bills $500 for a procedure with a TRICARE-allowable charge of $300, and the OHI pays $400. Previously, TRICARE would have paid the additional $100 because that is less than the $300 TRICARE would have paid if there were no other insurance. Under DOD's new rules, TRICARE pays nothing, since the other insurance paid more than 115 percent of the TRICARE-allowable charge.) In many cases, the beneficiary is stuck with the additional $100 in out-of-pocket costs.

DOD's shift in policy unfairly penalizes beneficiaries with other health insurance plans by making them pay out of pocket for what TRICARE previously covered. In other words, beneficiaries entitled to TRICARE 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 strongly recommends that the Subcommittee support directing DOD to eliminate the 115 percent billing limit when TRICARE Standard is second payer to other health insurance, to reinstate the "coordination of benefits" methodology, and provide the necessary funding for this purpose.

PERSONNEL AND COMPENSATION

Personnel Strengths and Operations Tempo

The Coalition has been dismayed at past annual Service requests for additional force reductions without any corresponding decrease in operational tempo. Innumerable newspaper reports have told stories of ships deploying with significant manning shortfalls or of hollow and overextended units that must cannibalize from others to meet manning requirements. Other news reports cite poor unit performance during evaluations because units lacked the time or resources, or both, to conduct needed readiness training. Still others document the strains on families when returning servicemembers still see little of their loved ones because they must work longer duty days to address home-station workload backlogs and catch-up on training requirements. Service leaders have tried to alleviate the situation by reorganizing deployable units, authorizing "family down time" following redeployment, or other laudable initiatives, but such things do little to eliminate long-term workload or training backlogs.

The Coalition strongly believes force reductions have gone too far and that simply halting force reductions is inadequate. The force is already overstrained to meet current deployment requirements, let alone address any new major contingency that may arise. The grinding operations tempo has become a major quality of life issue that won't go away, and it will not be fixed by "down time" or expressions of understanding and encouragement. Deferral of meaningful action to address this problem cannot continue without risking serious long-term consequences. Real relief is needed now, and can only be achieved by increasing the force, reducing the mission, or both.

The Military Coalition strongly recommends restoration of Service end strengths consistent with long-term sustainment of current deployments and fulfillment of national military strategy. The Coalition supports application of recruiting resources/voluntary recall policies as necessary to meet this requirement. The Coalition urges the Subcommittee to support and fund manpower options to ease operational stresses on active and Reserve personnel.

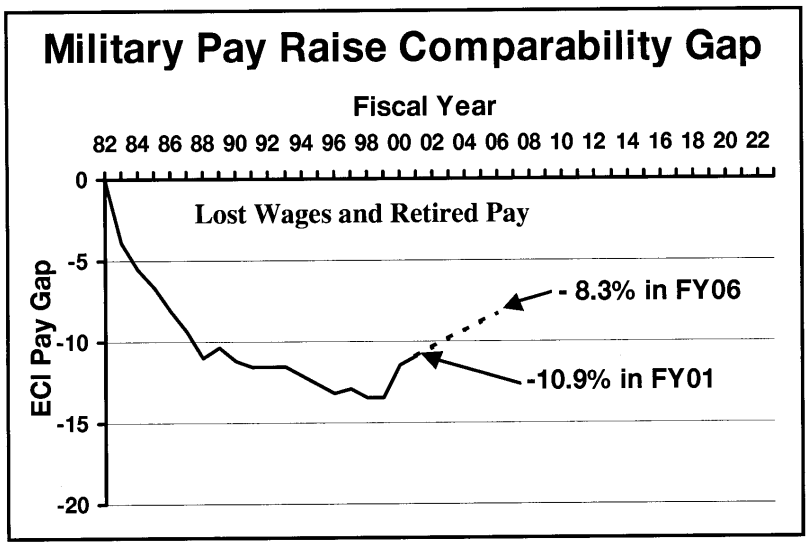
Pay Raise Comparability and Pay Table Reform

The Military Coalition is extremely appreciative of the Congress's leadership during the last two years in reversing the routine practice of capping servicemembers' annual pay raises below the average American's. Your determination to begin making up for those past shortfalls by funding "comparability-plus" pay raises in law through 2006 offered much-needed acknowledgment that the commitment between servicemembers and their Nation cannot be a one-way street. Likewise, the July 2000 pay table revision and the targeted pay raises for July 2001 provided more appropriate financial recognition for mid-career and high-performing servicemembers. But the Coalition urges the Subcommittee not to consider the work on pay matters complete.

Military and veterans associations know only too well the tremendous leadership effort required to reverse long-standing trends and win allocation of additional resources for programs that have been long-constrained. It must be acknowledged that the annual increases currently programmed will make up only a small fraction of the cumulative pay raise sacrifices imposed on servicemembers for almost two dec-

ades. As important as overturning past pay cap practices has been, we must acknowledge that an extra one-half of one-percent raise does not put a big boost in the typical enlisted member's take-home pay. Perhaps the best way to put the issue in perspective is to recall that the last time a large pay comparability gap coincided with a retention crisis (in the late 1970's), the gap was eliminated via double-digit raises in both 1981 and 1982.

Some have speculated that the cumulative 13.5 per cent gap between military and private sector pay growth between 1982 and 1999 would be obviated by the July 1, 2000 and 2001 pay table reforms or other "targeted" increases. Nothing could be further from the truth. In the past, when raises have been allocated differentially by grade or allowance, they have been described in "aggregate equivalent pay raise" terms (i.e., the overall pay raise value of the differential increase is calculated as if the cost of the initiative were applied equally across the board to all members). In aggregate terms, the fiscal year 2000 pay table realignment represented the cost equivalent of a 1.4 percent across-the-board pay raise. The targeted raises scheduled for this July equate to an additional 0.8 percent increase in overall pay. As of January 2001, the cumulative gap will have been reduced to 10.9 percent. By 2006, it will further decline to 8.3 percent. While this has been great progress, even if the "ECI plus .5 percent" pay raise adjustments were sustained beyond 2006, comparability would not be restored until 2023. The Administration's proposal to add $1 billion to military pay in 2002 will take us another important step toward pay comparability, and The Military Coalition strongly supports that initiative. But, further steps will be needed to close the gap and restore full pay comparability.



The Military Coalition urges the Subcommittee to provide the additional $1 billion necessary to address the Administration's military pay raise proposal for fiscal year 2002, and strongly recommends the Subcommittee support additional increases in annual pay adjustments as necessary to eliminate the accumulated pay raise shortfalls from previous years, as measured against the Employment Cost Index (ECI).

Basic Allowance for Housing (BAH)

The Military Coalition is most grateful to the Subcommittee for supporting initiatives to reduce out-of-pocket housing expenses for servicemembers. Responding to the Congress's leadership on this issue, DOD proposed plans to reduce out of pocket expenses to 15 percent in 2001 and reduce the median out-of-pocket expense to zero by fiscal year 2005. This aggressive action to better realign BAH rates with actual housing costs is having a real impact and providing immediate relief to many servicemembers and families who were strapped in meeting rising housing/utility costs.

We applaud this initiative and urge the Subcommittee's funding support, but we ask that more be done. Housing (especially utility) costs continue to rise, and mili-

tary pay will remain depressed for the foreseeable future. For these reasons, we urge the Subcommittee to provide the funding needed to accelerate BAH increases and eliminate all out of pocket expenses for servicemembers well before 2005.

The Military Coalition urges BAH funding as necessary to eliminate servicemembers' out of pocket costs as soon as possible.

Permanent Change of Station Issues

The Military Coalition is very concerned that servicemembers continue to incur significant out-of-pocket costs in complying with government-directed relocation orders. Department of Defense surveys show the government typically reimburses only two-thirds of the costs members actually incur in such moves. By any comparison, the servicemember is being short-changed in this area. Federal civilian employees receive much more substantial reimbursements in conjunction with government-directed moves, up to and including reimbursement for house-hunting trips and homeowner closing costs.

It is an unfortunate fact that permanent change of station mileage allowances and per diem rates have not been adjusted since 1986. The authorized duration for paying Temporary Lodging Expense allowance (TLE) was increased to 10 days several years ago, but the maximum amount payable per day has not been adjusted since 1986. These important reimbursements are sadly overdue for adjustment, and servicemembers are paying an unfair price for this delay.

We cannot avoid requiring members to make frequent relocations, with all the attendant disruptions of children's schooling, spousal career sacrifices, etc. But the grateful Nation that requires them to incur these disruptions so often should not be requiring them to bear so much of the attendant expenses out of their own pockets.

The Military Coalition urges a comprehensive updating of permanent change-of-station reimbursement allowances in the immediate future to ease the financial burdens currently being imposed on servicemembers. Increases should match the percentage increase in the Consumer Price Index (CPI) since the applicable allowance was last adjusted.

CONCLUSION

The Military Coalition would like to reiterate its profound gratitude for the extraordinary work this Subcommittee has done to provide personnel program funding in support of recruiting, retention and readiness.

But much work also remains to be done that will require the Subcommittee's continued funding support, particularly for health care and other compensation programs affecting all members of the uniformed services community.

Mr. Chairman and Distinguished Members of the Subcommittee, in closing, we very much appreciate the opportunity to present the Coalition's views on these critically important topics.

Senator INOUYE. I thank you very much, Commander, and I can assure you we will do our best.

Mr. LORD. Thank you.

The committee will stand in recess. I have been summoned to vote.

Senator STEVENS [presiding]. Any others who want to testify? Where are we? Mr. Mix.

STATEMENT OF ROBERT R. MIX, EXECUTIVE DIRECTOR OF GOVERNMENT AFFAIRS, NONCOMMISSIONED OFFICERS ASSOCIATION ON BEHALF OF THE NATIONAL MILITARY AND VETERANS ALLIANCE

Mr. MIX. Yes, sir, Mr. Chairman.

Senator STEVENS. Good morning.

Mr. MIX. I am Command Sergeant Major Randy Mix, U.S. Army retired, Executive Director of Government Affairs for the Noncommissioned Officers Association, here to present testimony on behalf of the National Military and Veterans Alliance.

Mr. Chairman, distinguished members of the subcommittee, the National Military and Veterans Alliance is most appreciative to this subcommittee for both interest in a strong national defense

and objective concern for the individual service members of all uniformed services. The members of the alliance salute your past efforts and note that the building blocks, programs, and benefits put in place for mission and people have been in the right direction, but need to be sustained, enhanced, and provided the fiscal resources to ensure continued viability.

The alliance statement focuses on pay and compensation issues of those who serve or have served. America's military personnel must know that their institutional benefits, such as pay, special compensations, health and survivor benefits, are secure now and in the future to free them of unnecessary anxiety and doubt of promises made should they be placed in harm's way.

There have been extraordinary efforts to restore the value of military pay to the comparable standard with the civilian sector over the past few years. While across the board pay raises need to continue for all personnel, the alliance additionally recommends that the targeted pay raise be directed at enlisted grades E–4 through E–9 to eliminate pay compression in the force structure.

The alliance also strongly supports the concept of pay equity for members of the Guard and Reserve and would ask for a top to bottom review to achieve pay parity. Additionally, flight pay for Reserve component air crews, thrift savings plan participation, heroism pay, and single rate basic allowance for housing are addressed in our written testimony.

Military health care system. While there are many issues concerning health care, the alliance simply requests that the subcommittee carefully scrutinize the costs of all DOD health care delivery systems and ensure that adequate fiscal resources are available for these programs that contribute to military readiness, keep the promises made to all people who serve long and faithful careers.

Finally, allow me to comment on concurrent receipt. The alliance appreciates the efforts of the subcommittee to secure necessary appropriations to put in place a special pay program for severely disabled military retirees. While you are not convened as authorizers, we ask that you aggressively seek resolution to the concurrent receipt issue that impacts all disabled veterans. It is past time to secure authorization and the necessary funding for the program. The alliance pledges you its full support to get concurrent receipt off of its annual casket ride through the halls of Congress and recorded on the rolls of the 107th Congress as a long overdue program entitlement.

Also, Mr. Chairman, in connection with concurrent receipt, I would like to mention military widows. Their husbands pay for a survivor benefit plan, then when the service member dies of a service-connected condition the government offsets the military survivor benefit plan dollar for dollar by the amount of dependency and indemnity compensation. The alliance would like to see an end to that offset and we request you support such a proposal if such a proposal and when such a proposal is included in the national defense authorization bill.

Mr. Chairman and members of the subcommittee, the alliance is most appreciative of this opportunity to present our comments for the record. I would be remiss if I did not acknowledge a new mem-

ber of the alliance who is not listed in our written submission, but fully supports the testimony, and that is the American World War Two Orphans Network.

Mr. Chairman, I thank you for allowing us to be here.

[The statement follows:]

PREPARED STATEMENT OF ROBERT R. MIX

INTRODUCTION

The National Military and Veterans Alliance (NMVA or Alliance) is most appreciative to the Subcommittee for both its interest in a strong national defense and equally important its objective concern for the individual service members of all Uniformed services. Your Subcommittee has an admirable record in the development of the annual National Defense Act building from year to year those services and benefits that ensure readiness of the force and all who have sworn to defend and protect the Constitution of the United States. The members of the Alliance salute your past efforts and notes that the building blocks, programs and benefits, put in place for mission and people have aggressively been in the right direction but need to be sustained, enhanced, and provided the fiscal resources to ensure continued viability.

The Alliance statement will focuses on pay and compensation issues of those who serve or have served and mutually supported by Alliance associations. NMVA also recognizes that pay and compensation gains of the past coupled with enhanced quality of life contribute to the readiness equation and retention of a sharply honed military force.

Today, the concept of an all-volunteer force is in fact a reality as is total force integration of active duty, National Guard and Reserve Components. As envisioned, the past decade has seen the military force decline by approximately one-third while unforeseen operational requirements and military tempo have increased over 300 percent. Today, Reserve Components routinely augment active forces worldwide and have become the force multiplier necessary for military contingencies, rotational requirements and peacekeeping missions. The interoperability of active and reserve components is nothing short of remarkable in planning and execution of missions. The straining points and effectiveness of a military force historically seem to be the result of reductions in the number of personnel available for world-wide operations; redefining the role of the military services for a global military strategy as currently underway at the Department of Defense; and, compensating members of the varied components differently in pay, benefits and health matters.

America's military personnel must know that their institutional benefits such as pay, special compensations, health and survivor benefits are secure now and in the future to free them of unnecessary anxiety and doubt of "promises made" should they be placed in harm's way. Honoring the health care promises to retired military personnel and their beneficiaries in the past National Defense Authorization Act has not only served the military retiree community but has fostered greater trust by today's serving military force in their military institution.

PAY AND COMPENSATION

Goal: Ensure that America maintains a strong national defense by maintaining a high quality, all volunteer force based on competitive pay for its active force and inflation protected retired pay for its retired force.

Basic Pay

Restoration of the military pay scale is essential:

Year's ago a recurring statement by dedicated military people was that they could no longer afford to serve and fight . . ." That statement is no longer valid because of the significant effort to restore the value of military pay to some standard of comparability with the civilian sector. Across the board pay raises need to continue for all personnel. The Alliance additionally recommends that a targeted pay raise be directed at enlisted grades E–4 through E–9 to eliminate pay compression in the force structure and create specific pay enhancement of every promotion earned.

NVMA recognizes that countless thousands of men and women have completed long and honorable careers and retired at pay rates that lagged civilian pay comparability by over 10 percentage points. That pay "comparability loss" dramatically impacted the quality of their lives while in the military and now even more with the computation of their retirement checks.

Perceived adequate pay would further strengthen the active force belief in the military institution.

Basic Allowance for Subsistence (BAS).—The criteria for adjusting BAS has waffled over the years with implementation of concepts related to a 1 percent annual increase, to criteria related to the consumer index of food cost, to the amount of the annual military COLA.

NMVA recommends that BAS and all other special allowances be adjusted by the annual percentage in the COLA for federal pay.

Basic Allowance for Housing (BAH).—NMVA has watched the roller coaster like adjustment of BAH over the past few years as regional adjustments were envisioned based on survey data that would have negatively impacted military families living on the civilian economy. NMVA applauds the leadership of the United States Congress and the Department of Defense for reviewing the matter and making the changes necessary to decrease further personal financial loss by military members for housing.

The Alliance urges this Subcommittee to support the Secretary of Defense in adjustment to the BAH. NMVA remains concerned about the inequity in BAH that causes military members living in the civilian sector an additional out-of-pocket expense that approaches 20 percent of their BAH. Those assigned to government housing do not have this type of out-of-pocket expense and in the judgment of NMVA neither should those not provided government housing.

RESERVE AND GUARD FORCES

NMVA has aligned concerns specifically related to Reserve and Guard Forces as a current force issue in recognition of their respected role in America's military force.

Pay Equity

NMVA strongly supports the concept of pay equity for members of the Reserve and Guard and would ask for top to bottom look to achieve pay parity.

Flight Pay for Reserve Component Air Crews:

Members of the active component and Reserve both are entitled to flight pay. A Reserve Tanker crew is awarded flight pay for each day of service monthly whereas an active duty tactical crew meets a prescribed number of flights and is awarded an entire month's flight pay. NMVA deplores this inequity.

Thrift Savings Plan (TSP):

Reserve and Guard Personnel were included in the TSP but at a different participation rate strategy than their active duty counterparts. First, the TSP program enacted authorized a service charge different for federal employees (6 percent), active duty (1.5 percent) and reserve personnel (8.4 percent). Also at issue is the authorized reserve member's contribution is limited to 5 percent of their monthly reserve earnings, as opposed to the active duty participation rate of 5 percent of annual salary. The average reservist earns approximately $400.00 monthly which would allow a $20.00 contribution to the TSP. The Alliance considers this amount for a TSP to be absurd

NMVA recommends that the service charge for active and Reserve component personnel be 1.5 percent. Further that reservists be authorized to contribute up to 5 percent of what would be their active duty annual salary.

Heroism Pay for Guard and Reserve:

NMVA will continue to press for the authorized 10 percent benefit for certain enlisted people in the Guard and Reserve credited with extraordinary heroism (Section 3991, Computation of Retired Pay (a)(2), Title 10. There are two cases that illustrate the inequity:

First, an active person qualifying for heroism retirement pay loses it if transferred to the Guard or Reserve. Second, a reservist called to active duty performs with valor and qualifies for the heroism pay loses the heroism pay when returned to the Guard or Reserve.

NMVA does not believe that the percentage or amount of heroism pay is adequate for any qualifying act of valor for which the payment may be authorized, and secondly is appalled that this benefit is not authorized for members of the Guard and Reserve.

Single Rate Basic Allowance for Housing:

Reservists performing active duty tours, for other than declared contingency operations, when billeted in government quarters and have no dependents, are not entitled to BAH. These individuals tend to be older and own homes in their own right

and have mortgage payments to make or rental agreements to honor. Conversely, Reservists performing comparable active duty tours with similar billeting and whose dependents are prevented from occupying those quarters is entitled to BAH.

NMVA strongly 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. BAH would be a career incentive and have retention value thereby reducing personnel losses due to a career disincentive.

MILITARY HEALTH SYSTEM FUNDING

Adequate Funding:

Members of the National Military and Veterans Alliance continue to voice strong concern that adequate funds are not available for either:

—The Military Health System
—TRICARE
—TRICARE FOR LIFE for military retirees and their eligible beneficiaries
—TRICARE Senior Pharmacy Program

The fact simply stated is that insufficient funds have been appropriated for the health care delivery systems implemented for all DOD beneficiaries.

DOD health leaders have acknowledged a short fall of an estimated $1.4 Billion in the current budget year. The Alliance is concerned that the short fall may well and substantially exceeds the DOD projection.

TRICARE FOR LIFE: Restoration of health benefits for over-65 retirees and their beneficiaries effective October 1, 2001 had limited startup funds available AND WAS NOT FULLY funded for fiscal year 2002. Retirees are lining up to use this restored benefit. In fact, if the participation rate in TRICARE Senior Pharmacy Program is an indicator this program may well exceed projections.

TRICARE Senior Pharmacy Program: This program implemented April 1, 2001 was also not fully funded. The Office of the Army Surgeon General reported recently that in the first 20 (repeat 20) days the cost of prescription drugs dispensed was over $37 Million. This program has the potential to be an annual budget buster!

NMVA was also pleased with last year's action to lower the Catastrophic Cap in the TRICARE. It's noted that fiscal resources were not to offset costs associated with the reduction.

THE POINT IS CLEAR: NMVA requests that this Subcommittee carefully scrutinize the costs of all DOD health care delivery systems and ensure that adequate fiscal resources are available for these health care programs that both contribute to military readiness and further keep the promise made to all people who served long and faithful careers.

OTHER HEALTH CARE ISSUES

Medicare Part B Enrollment:

TRICARE for Life required all retirees be enrolled in Medicare Part B for participation in the program in either the health care or senior pharmacy program. Alliance members believe that this program should be a stand-alone health care program, but recognizes, reluctantly, the imposition of Part B Medicare enrollment. Many senior aged members retired years ago when it was accepted that they would have access to military treatment facilities. Consequently, they declined participation if Medicare Part B when they became eligible for enrollment. Years later and after significant closures of military installations and DOD health care facilities, these retirees, many of whom are in their 70s or older would now have to pay significant penalties to enroll in Medicare Part B.

NMVA recommends that those who relied on former installations for health care and were 65 on or before October 6, 2000, the date the program was enacted by NDAA for fiscal year 2001 should be allowed to participate in TFL without Part B Medicare enrollment.

DOD Medicare Eligible Retiree Health Care Fund:

The Alliance continues to be intrigued by the structure of the DOD Health Care Fund and how payments on behalf of beneficiaries will be worked.

NMVA believes these funds should be vested in the beneficiary and should be disbursed to the healthcare provider dispensing health care service.

The Alliance also rejects any concept that military retirees, disabled or not, would have to choose their primary health care provider as either the DOD or Department of Veterans Affairs. Such a choice is not required of any other healthcare beneficiary.

AND LASTLY—CONCURRENT RECEIPT

The NMVA is grateful that this Subcommittee worked to secure the necessary appropriation to put in place a special pay program for severely disabled military retirees when it became apparent that Concurrent Receipt could not be negotiated and implemented.

NMVA supported the special pay for the severely disabled military retiree with great hesitation. At issue was the need for Concurrent Receipt to allow military retirees who also have service connected disabilities to:

—Retain their earned longevity retirement pay from the military.

—Receive their Disability Compensation from the Department of Veterans Affairs without any offset.

The Alliance recognizes the leadership role of every member of this Subcommittee and while your not convened as "authorizers" have the ability to actively and aggressively seek resolution to the Concurrent Receipt issue that impacts all service connected disabled veterans. It's past time to secure this authorization and the necessary funding for the program.

The Alliance recognizes a number of entitlement programs, such as those noted in this statement that were authorized and inadequately funded and yet other entitlements which had "appropriations assigned" pending expected authorization.

NMVA pledges each of you its full support to get Concurrent Receipt out of its annual casket ride through the halls of Congress and recorded on the rolls of the 107th Congress as a long overdue program entitlement.

CONCLUSION

Mr. Chairman and Members of the Committee the Alliance is most appreciative of the opportunity to present its comments for the record.

By the way, I would also like to thank you for the authorization to present American Flags to those who retire from military service. The flags are well received by the retiree and family. You know it's great to be able to fly your own special American flag while your still alive. Did you know that NO money was appropriated for the purchase of these flags? Commanders purchase them out of existing funds, which means your entitlement offsets dollars appropriated for other programs.

Again, the National Military and Veterans Alliance is most appreciative to participate in this special hearing.

Senator STEVENS. Thank you very much. Give us a little bit more information about that offset you are talking about about widows. That does not ring with my memory, but I am happy to hear about it. I do not have time to talk about it now.

Mr. MIX. Glad to do that, sir.

Senator STEVENS. Colonel Partridge.

STATEMENT OF CHARLES C. PARTRIDGE, COLONEL, U.S. ARMY [RETIRED], NATIONAL ASSOCIATION FOR UNIFORMED SERVICES

Mr. PARTRIDGE. Mr. Chairman, it is a pleasure to be here.

Senator STEVENS. Nice to see you again, sir.

Mr. PARTRIDGE. I want to take this opportunity to go over something you said last year and a couple of years before. You said that you wanted to fund military health care and that if the authorizers and the Department of Defense would give you a plan you would fund it. I want to thank you for doing that. That plan is funded and we know there is more money to be probably in the supplemental coming up and in the 2002 budget, and we very much appreciate your support, because if you had said you would not fund it we would not have had the program.

I would also like to add one point to what Mr. Mix said concerning the widows, that it is true that a military retiree buys a survivor benefit plan, but if he dies of a service-connected disability they offset what the widow's survivor benefit by the amount of DIC. What they do is they give her the money back——

Senator STEVENS. What is DIC?

Mr. PARTRIDGE. Dependents and indemnity compensation that she gets because of taking care of her husband while he was ill. It is his—that comes from the Veterans Administration, but DOD offsets its share when the widow gets that.

Senator STEVENS. You give me an amendment to straighten that out.

Mr. PARTRIDGE. We will give you something to straighten it out.

Mr. Chairman, that concludes my statement.

Senator STEVENS. Nice to see you again, Colonel. Thank you very much.

Mr. PARTRIDGE. Thank you.

[The statement follows:]

PREPARED STATEMENT OF CHARLES C. PARTRIDGE

The National Association for Uniformed Services would like to thank the Committee for its leadership in funding landmark legislation last year extending the Pharmacy benefit and TRICARE system to Medicare eligible military retirees, their families and survivors, making the lifetime benefit permanent, establishing the DOD Medicare Eligible Retiree Health Care Fund, reducing the catastrophic cap and making other TRICARE improvements.

Your actions in leading the fight for the Military Health Care initiative in the National Defense Authorization Act for fiscal year 2001 have restored the faith of millions of military personnel, retirees and their families. They believe that the nation does indeed value their service. This legislation also has a readiness impact since once again retirees can be counted on to recommend military service to the young men and women of our nation and to aid in the military services recruiting and retention efforts. In addition, the changes, when implemented will result in improved satisfaction of those currently serving.

Enacting the TRICARE For Life (TFL) legislation provides the authority for the government to keep the promise of healthcare for life to the men and women of the Uniformed Services who dedicated their lives in service to our country.

The Assistant Secretary of Defense (Health Affairs) and the TRICARE Management Activity have set up working level and senior level panels that include representatives of the Associations and the retiree Community, to develop the program and work out problems. It is clear that the policy makers and those charged with execution of the TRICARE For Life Program and the Pharmacy benefit are working hard to design an excellent medical program. In fact, they are glad to be involved in the process of rebuilding the military health system rather than continuing down the path of deeper funding and personnel reductions. The DOD Health Affairs Team has established an unparalleled working partnership with us as they implement the Pharmacy and TRICARE for Life legislation. As this landmark legislation is implemented, we of course need adequate funding. We also need organizational stability so that the changes in the Military Health System passed in the National Defense Authorization Act, for fiscal year 2001 can be put in place as smoothly as possible and implemented on schedule. All of us who have gone through the growing pains of TRICARE over the past 10 years do not want to revisit those turbulent times, particularly at the same time the Department is implementing the new Pharmacy and TRICARE for Life benefits.

The effective date of the pharmacy benefit was 1 April 2001 and is working properly. The full TRICARE FOR LIFE benefit is to be available 1 October 2001. Full funding for both of these programs is needed if they are to deliver on the high expectations of the retiree community. Unless the chronic underfunding of the Military Health System is corrected, the TRICARE for Life program will be built on sand and the entire program will be unsatisfactory and a disappointment to everyone.

The attached chart (Exhibit A) graphically displays the longstanding underfunding of the Military Health system. By every measure, military health care has been short changed over the past six years. The result has been many complaints surrounding the TRICARE system, the deterioration of the Military Treatment Facilities physical plant and inability to purchase up to date medical equipment.

DOD faces the difficult challenge of implementing an entitlement program and paying for it from the discretionary portion of their budget—both in fiscal year 2001 and in fiscal year 2002 until the Department of Defense Medicare-Eligible Retiree Health Care Fund becomes effective on 1 October 2002.

We know that you support additional funds for military health care this year and adding this to the baseline for fiscal year 2002. You have often said that if DOD and the Authorizing Committees will define the health care program and tell you what is needed, you will fund it. That has finally happened and we want to thank you for supporting additional funding in the Budget Resolution for military health care. We know that you will see that it is included in the Defense Appropriation as well.

TRICARE PRIME AND TRICARE SENIOR PRIME

We understand and support the decision to implement the TRICARE for Life Medicare supplemental on 1 October 2001, and then determine how TRICARE Prime for seniors will be implemented and the future of TRICARE Senior Prime. We are pleased that even if DOD and the Health Care Financing Administration cannot reach agreement on Medicare reimbursement DOD will continue the TRICARE Senior Prime program at the demonstration sites for those currently enrolled and those in TRICARE Prime. This is reassuring to retirees enrolled in the program that commitments made will be honored.

Medicare Part B Enrollment

The law enacting the TRICARE for Life program requires Medicare Part B enrollment for participation in the TRICARE for Life program. In addition, Part B is required for all retirees reaching age 65 on or after 1 April 2001, for them to participate in the new pharmacy program. Although we believe in the principle that the military benefit should stand-alone and not require Part B participation, the Part B will save the TFL program funds. However, we believe requiring Part B for participation in the pharmacy program does not result in significant savings and creates a hardship for some beneficiaries, and it should be eliminated. In addition, some 12,000 retirees residing overseas are required to participate in Part B Medicare in order to enroll in TRICARE for Life. Since they cannot use the Medicare benefits overseas we recommend that this requirement be eliminated for all retirees residing overseas.

Some retirees who lived near military installations did not enroll in Part B because they believed they would receive care at the hospitals and clinics located on the military bases, which subsequently closed. Many are in their 70's and 80's now and to enroll would require them to pay huge penalties.

We recommend that those who relied on these hospitals and were 65 on or before 6 October 2000, the date enacted by NDAA for fiscal year 2001, should be allowed to participate in TFL without enrolling in Part B Medicare.

FEHBP

The NMVA supported legislation last year that would provide military personnel the option of participating in the Federal Employees Health Benefit Program. Currently, a bill introduced in the 107th Congress, HR 179, would provide that option. In addition, DOD is conducting a demonstration project authorized in 1999 that would allow up to 66,000 Medicare eligible beneficiaries to participate in FEHBP at up to 10 sites. The demonstration ends on 31 December 2002. As of 26 February, there are 7,588 participants. The program is very popular in Puerto Rico with over 2,700 participants. Many organizations in the NMVA believe that FEHBP should be an option for all uniformed service beneficiaries. We are confident that the TRICARE program and the TRICARE for Life program will be successful. Further, because they are an outstanding value for most beneficiaries, they will be the health plans of choice. However, in a few cases, the TRICARE/TRICARE for Life options may not be the best choice, or may not be available; and for that reason, we believe the FEHBP option should be enacted. Certainly the FEHBP demonstration should be extended at least until 2005, and the geographical limits removed. Further, those who are currently enrolled should be allowed to remain in the program for as long as they wish. Providing the FEHBP as an option would help stabilize the TRICARE program, provide a market based benchmark for cost comparison and be available to those for whom TRICARE/TRICARE for Life is not an adequate solution.

CLAIMS PROCESSING

Most Medicare eligible military retirees because of lack of access to MTFs, have used the Medicare system and are happy with the claims process. The Medicare provider files the claim with Medicare, who pays the Medicare portion of the claim, forwards the claim to the second payer, the Medigap insurance company, and forwards an Explanation of Benefits to the patient. The Medigap insurer pays the claim and notifies the beneficiary that the claim is paid or that some co-pay or deductible is

due. The system is fast, efficient and understandable. It is essential that the TFL process work just as well and that the providers are satisfied. Otherwise, doctors, many of whom are reluctant participants in Medicare and TRICARE will be unwilling to accept TFL beneficiaries. We have discussed this in the working level panels and know that all are interested in making this work efficiently as well. This is, however, an area of concern that we will continue to monitor and if legislation is needed we will seek your support.

DOD/VA Beneficiaries

The VA portion of the President's Budget submission indicated that the Administration proposes that military retirees be required to select either DOD or VA as their health care provider. This would make retirees second-class citizens denying them VA care or forcing them to give up their military health care benefit. This test is not applied to other citizens and NMVA strongly opposes it. Since VA provides treatment of service connected disabilities free of charge, the military retiree who obtained most care through the military TRICARE system would be required to pay for services previously provided by the VA at no cost. We urge this subcommittee to oppose the proposal.

THE DOD MEDICARE ELIGIBLE RETIREE HEALTH CARE FUND

NMVA is most interested in the design of the DOD Health Care Fund and how the payments will be made.

NMVA believes that these funds should be "vested" in the beneficiary. If the beneficiary uses the MTF, then the funds should be paid to the MTF. Likewise, if the beneficiary uses other providers, then that is where the payment should be made. We believe decisions regarding the Health Care Fund can be critical to the success of the TFL program and to the quality of the Military Health System.

SUMMARY

Mr. Chairman and distinguished members of the Committee, we want to thank you for your leadership on military health care last year and for holding these hearings on implementation this year. You have made it clear that military health care continues to be a high priority and you have our support in seeing successful implementation of these health care initiatives this year.

Senator STEVENS. Mr. Hanson.

STATEMENT OF MARSHALL HANSON, DIRECTOR OF LEGISLATION, NAVAL RESERVE ASSOCIATION

Mr. HANSON. We would like to express our deepest appreciation to your subcommittee for your efforts over the last few fiscal years. During times when the footfalls of the military seemed precarious because of DOD's end strength cuts and recommended budget reductions, Congress and this committee provided direction through plus-ups to the recommended defense appropriation.

Coming to the defense of the armed services, you seized the initiative and provided needed improvements. Unfortunately, we may again be facing similar times. The military associations share with you the same frustration of not knowing what DOD is going to budget, and speculation is rampant contemplating additional end strength cuts.

As we wait for military transformation, the Naval Reserve Association is concerned that—pardon me. As we wait for an update to the defense budget, the armed services in general and the Navy in particular are challenged at sustaining current readiness operations. There is no doubt in my mind that procurement accounts are very tempting targets for reprogramming actions within the Navy and DOD.

We are concerned over the future structure of the Naval Reserve because of its equipment, ships and aircraft on the average being older than that of the active force. With a Future Years Defense

Plan (FYDP) that does not come close to making the procurement needs for the fleet, the Naval Reserve requirements for the most part fall off the table.

We worry for the future structure of the Naval Reserve because of the possibility that portions of it may become the billpayer to balance the budget. There is no doubt in my mind that there are some people in the Navy who have their sights on the Naval Reserve hardware units. Redistribution of a reserve P–3 patrol wing, a reserve carrier air wing, a reserve CB battalion, or a reserve cargo handling battalion would be an undesirable way to balance the Navy budget.

Personnel accounts can also prove too tempting. Reducing reserve budgets could provide easy money for the active force, but this would not be the first time the baby was thrown out with the bath water. As we watch this all unfold, we ask you to be sensitive and inquiring when you take future testimony.

The Naval Reserve Association looks upon the Naval Reserve as an insurance policy. The Navy invests about 3 percent of its total obligation authority into the resources and people of its reserve. For this investment it has a force that can be surged with trained personnel and ready equipment. The active force gets a further dividend on this investment by using these same reservists on a day to day basis as a temporary labor pool.

But when funding gets tight, the Navy is no different than you or I. It will seriously consider cancelling this insurance policy.

Our country embarked on its democratic course as a direct result of the militia reserve. The Guard and Reserve have made significant contributions in both world wars and more recently conflicts. The Reserve component is engaged today in day to day operations like no other time in history. The Guard and Reserve needs equipment and aircraft to continue to attract young Americans and also ensure that we are ready at a time of crisis or national need.

In our written testimony we provide the subcommittee with an optimal list of unfunded equipment and programs needed by the Naval Reserve. While budget constraints will not permit everything, it is requested that elements of this list should be given serious consideration. Equipment procurement is not only an investment, it is also an endorsement to the troops for a job well done.

Thank you.

Senator STEVENS. Thank you very much. We will read the list, I promise you.

[The statement follows:]

PREPARED STATEMENT OF MARSHALL HANSON

INTRODUCTION

On behalf of more than 86,000 active Naval Reservists, we would like to express our deepest appreciation to each of you for your efforts over the last couple of fiscal years. During times when the pathway for the military seemed dubious because of DOD end-strength cuts and recommended budget reduction, Congress and this committee provided direction through plus-ups to the recommended defense appropriation. Coming to the defense of the Armed Forces, you seized the initiative and wrought needed improvements.

Unfortunately, the military, the Navy and the Naval Reserve can't rest with just the successes of the past.

It appears that the new administration has embarked on reshaping the Armed Forces without first establishing a new national security strategy, and then opening

it to debate. The Naval Reserve Association is concerned that while we wait on a supplemental to the Defense Budget, the Armed Services in general, and the Navy in particular, are challenged at sustaining current readiness and operations with rising operations and support costs associated with aging equipment, aircraft and ships. There is no doubt in my mind that procurement accounts are very tempting targets for reprogramming action within Navy and DOD as they have been in the past. Rumors abound, that the inward, downward spiral set into motion by a decade of DOD cuts continues unabated and that should cause all of us concern for the future.

We are also concerned over the future structure of the Naval Reserve Force because its equipment, ships and aircraft are, on average, older than the active force. With a FYDP that doesn't come close to meeting the procurement needs for equipment, ships and aircraft, the Naval Reserve requirements for the most part fall off the table. We cannot count on the once robust National Guard and Reserve Equipment (NGRE) Allowance to level the playing field, and last year's $5 million appropriation barely scratched the surface of need. If it were not for the actions of Congress, the Naval Reserve would not have received its sixth C–40A aircraft. These new aircraft will replace the aging C–9 fleet that today is operating aircraft that are older than the Air Alaska flight that fell from the skies off of California last year. The first C–40A was delivered to the Naval Reserve in April.

We also have concerns for the future structure of the Naval Reserve Force because of the possibility that portions of it may become the "bill payer" to balance the budget for submission. There is no doubt in my mind that today there are "smart" people in the Navy who have their sights on Naval Reserve hardware units. Redistribution of a Reserve P–3 Patrol Wing, a Reserve Carrier Air Wing, a Reserve Seabee Battalion, or a Reserve Cargo Handling Battalion would be a way to balance the Navy budget. Personnel accounts could also prove too tempting. It would not be the first time that the baby was thrown out with the bath water. As we watch this all unfold, we ask you to be sensitive and inquiring when you take future testimony.

We look upon the Naval Reserve as an insurance policy. The Navy invests about three percent of its total obligation authority into the resources and people of its Reserve, and for this investment it has a Force that can be surged with trained personnel and ready equipment. In the process it gets a dividend on its investment by using this very Force in day-to-day operations as a temporary labor pool. When funding gets tight the Navy is no different than you or I—it will seriously consider canceling that insurance policy. We need to be sensitive and inquiring about this as well.

Our country embarked on its democratic course as a direct result of militia forces. The Guard and Reserve have made significant contributions in both World Wars and more recent conflicts. The Guard and Reserve is engaged today in day-to-day operations like no other time in history. The Guard and Reserve needs equipment, aircraft and ships to not only continue to attract young Americans to serve, but also to ensure that we have what is required in time of national need.

Details of specific requirements have been included in this written.

ANTICIPATED FISCAL YEAR 2002 UNFUNDED REQUIREMENTS READINESS SHORTFALLS

RPN:

Funding for Boot Camp and "A" Schools for Non Prior Service (NPS) personnel who are directly recruited into the USNR.

Non-Prior Service (NPS) Bonus ($2.4 million).—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.

Individual Protective Equipment procurement is needed to train and outfit reservists who will be going to a theater location where a threat of biological or chemical agents could be possible. Currently, while active duty members have equipment reservists are sent w/o protection. (e.g. Korea)

Annual Training (AT).—Continued funding to permit the (14) days A.T. as outlined by law, and (17) days for OUTCONUS, plus (2) days travel.

Inactive Duty Training Travel (IDTT).—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. Funding should support a minimum of two visits per year.

Active Duty for Training (ADT-FLEET SUPPORT).—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.

Recruiting Shortfalls

Reserve Recruiter Support & Advertising.—Aggressive national recruiting advertising campaigns needs to be maintained. Advertising campaign includes media and market research, and placement of advertising in television, print, radio, direct mail, and public service announcements. Funding should also provide for additional recruiting support, which would allow the NR to build its recruiters force to a total of 90.

OMNR

Reserve Ship Depot Maintenance.—Includes deferred maintenance to meet guidance levels.

Reserve Base Support, Real Property Maintenance.—Funds are needed to arrest growth of critical backlog and hold such backlog at fiscal year 2001 level. Most of the buildings were built back in the 1940s/50s. Additional funds are need for collateral equipment furnishings and vehicles to complete MILCON projects.

—RPM funding is need for demolition in RESFOR projects.

CONTINUING NAVAL RESERVE MODERNIZATION REQUIREMENTS

The C–40 aircraft procurement is needed 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 (28) 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 six 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 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 solution would be purchasing three aircraft each year, over the next seven 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.

Money is also being requested for 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 based systems, upgrading its legacy software. 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.

Funding is needed for the Naval Coastal and Expeditionary Warfare Forces, Seabees and MIUW's to provide CESE, communications, and field support equipment. Existing equipment is aged, and worn, often being to commercial specifications, rather than military. Active units for deployment overseas have borrowed some of this equipment. Naval Coastal Warfare is growing in importance with the Navy's focus on littoral operations. Home Defense multiplies the importance. Newer equip-

ment needs to be procured in an ongoing schedule to be able to upgrade unit readiness.

Littoral Surveillance System, one is required per year for regional/port surveillance. This equipment has the capability to assist in waterside security of afloat units.

Also needed 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.

Upgrading the Naval Reserve F/A–18A with precision guided munitions capability is a requirement. 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.

The Naval Reserve needs 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 and our deploying pilots would be less well trained.

The Naval Reserve has acquired C–130's over numerous budget years. Cockpit configurations differ between airframes. Funding is needed to standardize cockpit configuration of all NR/MCR C–130 T aircraft.

Upgrades for USNR helicopter forces will provide funding for infrared FLIR kits.

Aircrew training is an ongoing requirement. Reduced air hours prevent in-flight training. Computer based training to support maintenance and aircrew training.

Projected costs of unfunded equipment and training requirements

[In millions of dollars]

Airlift, C–40A Transport Aircraft (3), replacing aging C–9 aircraft	181.00
ADT, Fleet support funding to meet CINC requirements	13.10
Base Operation Support, collateral equipment furnishings and vehicles to complete MILCON projects	6.40
Coastal/Expeditionary Warfare, upgrade equipment for CB/ELSF/NCW units	35.10
CBT, Computer Based Training, to train maintenance/aircrew on NR logistics aircraft	7.30
C–130T Avionics Modernization, to standardize cockpit configurations of all N&MCR aircraft	2.35
Increase C–130T Depot Level Maintenance Funding, funding for (5) aircraft not currently funded	1.50
C–9 Upgrades, to maintain and improve an aging C–9 Fleet	1.40
FLIR Kits (AAS–51Q) for SH–60B, procure forward looking infrared	7.00
Funding for Boot Camp and "A" Schools for NPS Personnel per year recruited directly into USNR	170.00
F/A–18 Mod, ECP 560, upgrade Reserve F/A–18A precision munitions capability (6) aircraft	36.60
F–5 Global Positioning System, procure for fleet by fiscal year 2005	8.10
F–5 Avionics Modernization, upgrading the 25 year old F–5 package for 12 aircraft	47.00
F–5 Radar Upgrade, replace existing radars	3.73
Individual Protective Equipment, to procure IPE and train units in gear required for CINC tasking	3.40
IT CNRF Infrastructure, upgrade network infrastructure not included in NMCI	17.00
IT Legacy, Reserve sustainment, funding required to operate legacy IT systems at minimal levels	6.00
IT Reserve Modernization, upgrading existing legacy systems to perform enhanced & new functions	8.60
Littoral Surveillance System, procuring (1) system for year for regional/port surveillance	30.00
NMCI, Naval Marine Corps Intranet, expanding system to SELRES and TAR personnel	45.00
Non Prior Service Enlistment Bonus, implementing NPS bonus program to compete with other RC's	2.48
Operational Flight Trainer upgrade/mod, to match current P–3C configuration	5.00

Projected costs of unfunded equipment and training requirements—Continued

P–3C/BMUP Kits, to achieve commonality with Active P–3C UD III squadrons	49.90
P–3C CDU upgrades, to increase counter drug capabilities	3.00
P–3C Synthetic Aperture Radar, (1) aircraft	3.00
P–3C Update III Simulator, Deployable Embedded Tactical Trainer System Units	1.00
P–3C ESM Trainer upgrade, to match upgraded equipment included on improved aircraft	4.50
Reserve Ship Depot Maintenance, funds required to meet guidance levels	13.90
Reserve Aircraft Modernization, upgrade various avionics on RN P–3C's	2.50
RPM, Funds needed to arrest the accumulating growth in Backlog of Maintenance and Repair	20.30
RPM Funding for Demolition in RESFOR projects	3.98

Alphabetical listing, not in order of priority.

Senator STEVENS. Our next witness is Mr. Wolff—Miss Wolff, pardon me. Miss Wolff.

STATEMENT OF LIESEL WOLFF, LEGISLATIVE ASSISTANT, PEOPLE FOR THE ETHICAL TREATMENT OF ANIMALS

Ms. WOLFF. Good afternoon, Chairman Stevens. My name is Liesel Wolff and I represent the largest animal rights organization in the world, PETA, People for the Ethical Treatment of Animals. Thank you very much for this opportunity to discuss the use of live animals in food procurement exercises in military survival skills training. We would like to request that the subcommittee include report language stipulating that no Department of Defense funds shall be used to procure animals for these wasteful and inhumane exercises.

Each year in training courses around the country, American soldiers are instructed to bludgeon, strangle, or decapitate chickens, rabbits, goats, sheep, and other animals. Soldiers sometimes carry the animals in a backpack for several days before killing them. Alternatively, animals are taken by vehicle into the woods, where they are let go and then recaptured. In these cases, the animal must undergo the extreme stress of disorientation upon being released from confinement into unknown territory and then the terror if being hunted and recaptured.

The killing methods used ensure that the animals die in states of extreme pain and fright. One Army manual says: "You can club small animals or step on them." Another Army manual instructs soldiers to kill a chicken "by placing its head under a strong stick, placing both your feet on either side of the stick, and pulling vigorously until its head is pulled off." Other reports indicate that animals are bludgeoned by hand or with a blunt instrument. All of these deaths are slow and agonizing.

Moreover, training soldiers to kill animals diverts time and resources away from teaching more valuable survival skills. Will Anderson is a former Air Force sergeant who taught survival skills for 3 years at Fairchild Air Force Base. Part of that training included killing rabbits and butchering them. Sergeant Anderson now strongly objects to these exercises, calling them "completely unnecessary."

PETA has also heard from active and retired military personnel from around the country who have written to express this same sentiment. According to Sergeant Anderson and other officers from

whom we have heard, teaching soldiers to kill animals does nothing to increase their ability to survive and diverts time and resources away from teaching the truly important skills for survival, namely how to find shelter, how to obtain drinkable water, and how to identify edible plants.

Additionally, because it is a time and calorie-consuming activity that requires travel, hunting an animal would be unwise in most survival situations.

Finally, it is pointless for a soldier to practice killing docile animals, considering that in a real survival situation few soldiers would have trouble doing so if survival truly depended on it. After all, soldiers do not practice killing other humans in order to be effective in combat situations.

Several cancellations have shown that killing animals is not considered necessary. In 1999, PETA wrote to now-former Major General Leo Baxter, who was then commanding General at Fort Sill, Oklahoma. He responded that a proposed survival skills exercise involving live animals was not approved and that "we are in complete agreement that there is no need to utilize live animals for realistic survival skills training." After PETA and members of the public expressed their objections, the Maryland Army National Guard cancelled their plans to use live animals in the training exercises conducted on June 24th and 25th of last year. The Massachusetts Army National Guard 26th Infantry Brigade has permanently eliminated the use of live animals in their curriculum.

To summarize, please include report language stipulating that no funds for the Department of Defense shall be used to purchase animals for military survival skills training.

Thank you very much for your time and I hope you will consider this step to prevent needless suffering.

Senator STEVENS. Thank you very much.

[The statement follows:]

PREPARED STATEMENT OF LIESEL WOLFF

Chairman Stevens and Members of the Subcommittee, people for the Ethical Treatment of Animals (PETA) is the world's largest animal rights organization, with more than 700,000 members. We greatly appreciate this opportunity to submit testimony regarding fiscal year 2002 appropriations for the Department of Defense. My testimony will focus on the inhumane and wasteful use of live animals in military survival skills training.

We would like to request that the subcommittee include report language ensuring that no funds are used for the needless use of animals for emergency food procurement exercises in survival skills training.

Each year, American soldiers are instructed to bludgeon, strangle, or decapitate chickens, rabbits, goats, sheep, ducks, turtles, and snakes with their bare hands, rocks, or blunt instruments.

In 1998, the Air Force killed more rabbits in its survival skills courses than did the entire Department of Defense in all its own research facilities combined. Fairchild Air Force Base in Washington and the United States Air Force Academy alone use more than 1,600 rabbits each year at an average cost of more than $10,000. Many thousands of animals are used every year in other training courses around the country.

Training soldiers to kill animals diverts time and resources away from teaching more valuable survival skills

Will Anderson is a former Air Force Sergeant who taught survival in both classroom and field settings for three years at Fairchild Air Force Base. Part of that training included killing rabbits and butchering them. Sgt. Anderson now strongly objects to these exercises, calling them "wholly unnecessary."

According to Sgt. Anderson, unlike shelter and water, food is not a survival issue and does not become one for two to three weeks. Anderson has stated that killing domestic animals does nothing to increase a soldier's ability to survive, and diverts time and resources away from teaching the truly important skills needed for survival, namely, how to find shelter, how to obtain drinkable water, and how to identify edible plants.

This was illustrated by Air Force Captain Scott O'Grady, who was shot down over Bosnia in 1995. Captain O'Grady subsisted for 6 days in harsh conditions on plants and water. In 1999, a hiker made national news by surviving for six weeks in the desert by eating plants and finding reliable sources of water.

A soldier is very unlikely to find domestic rabbits or chickens in a jungle, desert, or wherever he or she is stranded. Additional considerations are that hunting an animal would attract unwanted attention if the person is in hostile territory. Also, hunting is a time and calorie-consuming activity that requires travel, which is unwise in most survival situations.

Finally, it is pointless for a soldier to practice killing docile animals, considering that in a real survival situation, few would have trouble doing so if survival truly depended on it. After all, soldiers do not practice killing other humans in order to be effective in combat situations.

The exercises cause pain and suffering

Soldiers sometimes carry their own animals in a backpack for several days before killing them. Being crammed in a backpack for days on end denies the animal the ability to make any normal postural adjustments, or even to stretch a limb, much less have any protection from being crushed or pounded by the weight of the pack and the constant jarring of the soldier's stride.

Alternatively, animals are taken by vehicle into the woods where they are let go and then "recaptured."

In both cases, the animal must undergo the extreme stress of disorientation upon being released from confinement into unfamiliar territory and then the terror of being hunted and recaptured.

The killing methods used ensure that the animals die in states of extreme fright and pain. One Army course manual says "you can club small mammals or step on them." Another Army manual instructs soldiers to kill a chicken "by placing its head under a strong stick, placing both your feet on either end of the stick—and pulling vigorously until its head is pulled off." Other reports indicate that animals are bludgeoned by hand or with a blunt instrument. All of these deaths are slow and agonizing.

Several cancellations prove that killing animals is not considered necessary

In 1999, PETA wrote to (now former) Major General Leo J. Baxter, who was then commanding general at Fort Sill, Okla., who responded that a proposed survival skills exercise involving live animals was not approved and that "we are in complete agreement that there is no need to utilize live animals for realistic survival skills training."

Last year, after PETA and members of the public expressed their outrage, the Maryland Army National Guard cancelled their plans to use live animals in the training exercises conducted on June 24 and 25, 2000.

The Massachusetts Army National Guard, 26th Infantry Brigade, has permanently eliminated the use of live animals from their curriculum.

These cancellations are further proof that effective survival skills training does not need to include the use of live animals.

SUMMARY

Thousands of animals suffer needlessly in these pointless exercises at the expense of American taxpayers. We request that the subcommittee help end this cruel practice by including report language that specifically prohibits such animal use. Please include the following phrase in the report accompanying the fiscal year 2002 Department of Defense appropriations bill: "No funds for the Department of Defense in fiscal year 2002 shall be used to purchase animals for military survival skills training."

Thank you for your consideration of our request.

Senator STEVENS. Dr. Cunnion.

STATEMENT OF STEPHEN O. CUNNION, M.D., CAPTAIN, U.S. NAVY [RETIRED], GLAXOSMITHKLINE

Dr. CUNNION. Hello. I am Dr. Steven Cunnion, retired Navy Captain. I have been involved with hepatitis B research for most of my medical career. Starting in 1970 as an Army medic, I cared for Vietnamese who had liver cirrhosis and cancers caused by this virus. My first research project in the military was a study of hepatitis B among sailors and marines in the Pacific fleet. Later when I was Director of Preventive Medicine and Occupational Health for the Navy, I was involved in writing the Navy's policy on hepatitis B and became well aware of many of the competing priorities within the DOD's health care budget.

I thank you for the opportunity to testify today to support funding for immunizing recruits against hepatitis B. Let me summarize the risks posed by hepatitis B and state the current recommendations. Hepatitis B is a serious, sometimes fatal, blood-borne disease that poses a special risk to our military. As in the case of HIV, hepatitis B is transmitted through contact with contaminated blood of bodily fluids. Because of this, our troops are especially susceptible, not only during wartime, when bodily fluids are splattered everywhere, but also during other than war operations, where hundreds of thousands of refugees may come in close contact with our personnel.

Although hepatitis B is often thought of as a sexually transmitted disease, it can be acquired in an occupational setting, such as aboard ship or on bivouac when troops share razors and other personal gear. When overseas, our forces are highly exposed if they become involved in an accident requiring a local blood transfusion or involved in sexual activities or get a haircut or a manicure, or even go down to the local tattoo parlor.

Hepatitis B is about 100 times more contagious than HIV. Worldwide there have been at least 400 million people who can transmit this disease. During my hepatitis B study in the Pacific, one in every 100 persons became infected in just a 6-month time frame.

The symptoms of hepatitis B may vary, ranging from asymptomatic to long-term disabling fatigue. It causes 11,000 hospitalizations and kills 3 to 4,000 Americans each year. Worldwide the death toll is about one million people.

Not only can hepatitis B be deadly, it can be also very costly. In 1991 it was estimated that hepatitis B cost $700 million in medical costs and lost productivity in the United States alone. Chronic hepatitis B can also lead to costly liver transplants that numbered over 4,000 in 1997.

It is a challenge to track the true costs of hepatitis B acquired in the military since liver failure does not occur until 20 or more years after the initial infection. This is why our military health care system spends relatively little for treatment. The VA and Medicare end up paying for most of the hepatitis B's costly sequelae.

The point really is these symptoms, deaths, medical costs, and lost productivity are all preventable through the use of a highly effective vaccine. In 1991 the National Advisory Committee on Immunization Practices endorsed a universal hepatitis B immunization strategy beginning with newborns. The Centers for Disease

Control states anyone under 19 should be vaccinated. The American College Health Association recommends hepatitis B immunizations for all entering college students. If we find it important to protect our college students, should not our military recruits deserve the same?

Twelve years ago the Armed Forces Epidemiological Board recommended that hepatitis B immunizations become part of the basic immunizations for all our military personnel. Frequent international travel, often at a moment's notice, to countries where hepatitis B is highly prevalent puts our military personnel in harm's way unless they are vaccinated beforehand.

Although recent studies on military populations have shown that the rate of hepatitis B is declining, the military rate still exceeds that of a comparable civilian population.

The Centers for Disease Control and the World Health Organization (WHO) recommend vaccination for high risk groups. These groups include all health care workers, sexually active individuals, travelers who need medical or dental procedures while abroad, and international travelers spending more than 6 months in endemic areas, such as Southeast Asia, Africa, Eastern Mediterranean, Eastern Europe, and the Pacific Islands. These categories describe our military personnel exactly.

While the service has implemented these high-risk group immunizations for health care workers and some travelers, broad protection of all recruits has not been feasible due to the lack of dedicated funding. Mandating vaccinations without ensuring dedicated funding for this immunization at a time of other competing needs will not get this job done.

The Hippocratic Oath states: "First, do no harm." Failure to routinely protect our newest military personnel against hepatitis B, a protection that is increasingly recommended for the civilian population who is at much lower risk than our military, must be addressed. The $12 million requested appropriation for hepatitis B immunizations for recruits to protect them from this preventable disease is simply the right thing to do. I urge your support.

Thank you for the opportunity to speak before you. Thank you.

[The statement follows:]

PREPARED STATEMENT OF STEVE CUNNION

I'm Doctor Steve Cunnion, and am a retired U.S. Navy Captain and I have been involved with hepatitis B for most of my medical career. Starting in 1970, as an Army medic with the 29th Civil Company, I cared for Vietnamese patients with liver cirrhoses and cancers caused by this virus. My first large medical research project in the military was a study determining the infection rate of hepatitis B among sailors and marines in the Pacific fleet. Later, when I was Director of Preventive Medicine and Occupational Health for the Navy and Marine Corps, I was involved in writing the Navy's policy on hepatitis B vaccination and became well aware of the many competing priorities within DOD's health care budget to maintain a fit and ready force. I thank you for the opportunity to testify today to support funding for immunizing recruits in the Armed Forces against hepatitis B.

Let me summarize the risk posed by hepatitis B to our military personnel and state the current recommendations concerning hepatitis B immunization.

Hepatitis B is a serious, sometimes chronic and fatal, bloodborne disease that poses a special risk to military personnel. As in the case of HIV, hepatitis B is transmitted through contact with contaminated blood or bodily fluids. Because of this, our troops are especially susceptible, not only during wartime exposure when bodily fluids can be spattered everywhere, but also during "other than war" operations when hundreds of thousands of refugees and displaced persons may come in

close contact with our personnel. Although Hepatitis B is often thought of as a sexually transmitted disease, it can be transmitted in industrial occupational settings such as aboard repair ships or in bivouac conditions where troops shared razors and other personal gear. When overseas, our forces have a high risk of exposure to hepatitis B if they get involved in any accident requiring a blood transfusion or are involved in sexual activity, or get a haircut or manicure or even go down to the local tattoo parlor.

Hepatitis B is 100 times more contagious than HIV. This disease is widespread and infects 300,000 Americans annually. One and a quarter million Americans are chronically infected carriers of the disease. This disease can infect up to 60 percent of the population on some islands in the Pacific. Worldwide, there are at least 400 million carriers of this virus. During my study in the Pacific one of every hundred persons were infected by the hepatitis B virus in just a six month period.

The symptoms of hepatitis B vary, ranging from an asymptomatic infection to long term disabling fatigue. It causes 11,000 hospitalizations and kills four to five thousand Americans each year. Worldwide, the yearly death toll is one million.

Not only can hepatitis B be deadly, but it is also very costly to the health care system. In 1991, it was estimated that hepatitis B cost $700 million in medical costs and lost productivity in the United States alone. For example, chronic hepatitis B can result in liver dysfunction that can lead to costly liver transplants which numbered over 4,000 in 1997.

Ten percent of those with illness develop a smoldering infection called chronic hepatitis that will take an average of ten years off a patient's life. This makes it a challenge to track the true costs of hepatitis B acquired in the military since liver failure doesn't occur until 20 or more years after the initial infection. This is why there are relatively small expenditures in the military health care system for the treatment of hepatitis B among active military personnel. However, the VA and Medicare end up expending significant resources treating hepatitis B and its resulting complications in retired military personnel and veterans.

The point really is: These symptoms, deaths, medical costs and lost productivity caused by hepatitis B ARE all preventable through the use of a highly effective vaccine.

Recognizing this fact, since 1991, the National Advisory Committee on Immunization Practices has endorsed a universal strategy, beginning with newborns, for hepatitis B vaccination.[1] Adolescent vaccination was recommended in 1994. A new Centers for Disease Control brochure clearly states "everyone under 19 years old should get vaccinated against hepatitis B". This is particularly important because the highest rate of hepatitis B infection is seen among teenagers and young adults. Indeed, the American College Health Association recommends universal immunization against hepatitis B for entering college students. If we find it important to protect our college students and their families against hepatitis B, shouldn't our military recruits and their families deserve the same?

Hepatitis B poses a special risk to military personnel even beyond those of young adults in the United States who are already recommended to receive this vaccine. This was reflected 12 years ago by the Armed Forces Epidemiological Board in its recommendation that "immunization against hepatitis B should be planned and become a part of the basic immunizations of all military personnel."[2] Frequent international travel, often on a moment's notice, to countries where hepatitis B is highly prevalent, puts our military personnel in harm's way unless they are vaccinated beforehand. Although recent studies on military populations have shown that the overall rate of hepatitis B has been declining, most likely due to decreased illicit drug use and the closures of our overseas bases, the military's hepatitis B infection rate still exceeds those in comparable civilian populations.

In addition to routine vaccination for all adolescents and young adults under age 18, the Centers for Disease Control and the World Health Organization recommends vaccination against hepatitis B for high-risk groups. These groups include all health care workers, sexually active individuals, travelers who may need to undergo medical or dental procedures while abroad, and international travelers who plan to spend more than six months in endemic areas, such as southeast Asia, Africa, the

[1] United States Department of Health and Human Services, Public Health Service, Centers for Disease Control; MMRW, November 22, 1991; Hepatitis B Virus: A Comprehensive Strategy for Eliminating Transmission in the United States Through Universal Childhood Vaccination, Recommendations of the Immunization Practices Advisory Committee (ACIP).

[2] AEFB (15–1a) 88–6, October 4, 1988.

eastern Mediterranean, eastern Europe, and the Pacific Islands.[3] These categories describe our military personnel exactly.

While the Services have implemented these "high risk group" immunization guidelines for health care workers and some traveling personnel, broader protection of all recruits has not been feasible due to a lack of dedicated funding. Mandating vaccination without ensuring sufficient resources for this immunization at a time of other competing needs such as expanded retiree care, pharmacy benefits, and TriCare, WILL NOT get the job done.

The Hippocratic Oath states "first, do no harm". Failure to routinely protect our newest military personnel against hepatitis B, a protection that has been increasingly recommended over the past decade for all infants, children and young adults in the United States, MUST be addressed. Indeed, our military members are at an even much greater risk. The $12 million requested appropriation for hepatitis B immunization of recruits to provide protection against this known and preventable disease is simply "the right thing" to do. I urge your support. Thank you for the opportunity to speak with you today.

ADDITIONAL SUBMITTED STATEMENTS

Senator STEVENS. Thank you very much. If there are any other persons here that wish to submit statements for the record, they may do so.

[The statements follow:]

PREPARED STATEMENT OF THE UNIVERSITY OF MIAMI

Mr. Chairman, I thank you and the Members of the Subcommittee for this opportunity to submit testimony today on behalf of 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, more than 2,300 faculty instruct almost 14,000 undergraduate, graduate, and professional students in facilities located on four major campuses.

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.

In fiscal year 2000 you provided support to launch the National Center for Tropical Remote Sensing Applications and Resources. Our partnership with the Department of Defense has developed and continued. In fiscal year 2002 we hope to continue our joint efforts to move this vital project forward. Your small investment in the National Center for Tropical Remote Sensing Applications and Resources 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, local 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 on the former United States Naval Observatory/Alternate Time Service Observatory in Perrine, Florida will provide a unique capability for the Caribbean and

[3] United States Centers for Disease Control and Prevention, Health Information for International Travel, 1999–2000, 100; World Health Organization International Travel and Health: Vaccination Requirements and Health Advice, Jan. 1999, 67.

southeastern United States region. The existing Very Long Baseline Interferometry (VLBI) antenna and the existing ancillary hardware and buildings are ideal for this purpose. Applications at 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 will 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 "post-diction" 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 United States, 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 United States both directly and indirectly. Examples include illegal immigration, reliance on a drug economy, and lost market opportunity for United States 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 earth-

quake 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. Furthermore, 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 new National Center for Tropical Remote Sensing at the University of Miami would provide a unique opportunity for FSGC to begin dedicated education and training of the use of space-based remote sensing and imagery. 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. We envision the development of a magnet studies program in space science that would be modeled after a very successful existing program in marine science and technology in collaboration with the University of Miami. This partnership would

educate first-rate students and help produce the next generation of scientists, engineers, and technology experts for the nation.

Mr. Chairman, your previous support to launch this vital remote sensing initiative has brought us to an important juncture. Now, we need to bring the project to operational status. We hope to continue our partnership in fiscal year 2002 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.

PREPARED STATEMENT OF THE COALITION OF OKLAHOMA INSTITUTIONS OF HIGHER EDUCATION CENTER FOR AIRCRAFT AND SYSTEMS/SUPPORTING INFRASTRUCTURE

Mr. Chairman and members of the Subcommittee, we 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. This testimony will identify the motivating national interest in aircraft and systems/support infrastructure, and describe the CASI approach to serve those needs.

We gratefully acknowledge Congress's incremental funding for the past year to the Department of Defense in the amount of $1,800,000 for CASI infrastructure enhancement. Today we respectfully request an additional $6,000,000 in the pending budget. This request consists of $5,000,000 for infrastructure enhancement at the three comprehensive universities and $1,000,000 to aggressively engage Oklahoma's smaller regional universities in supporting the CASI mission. Funding of this request will serve to substantially improve and integrate CASI coalition resources for the purpose of supporting the Department of Defense's air logistics centers.

STATEMENT OF NATIONAL INTEREST

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 United States Air Force Aircraft, the committee reported, "The United States 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 almost 40 years. According to recent reports, the C/KC–135 fleet is scheduled for retention in the operational inventory until the year 2040, when the average aircraft age will approach 80 years. The Oklahoma City Air Logistics Center (OC–ALC) at Tinker Air Force Base supports the C/KC–135 and other aircraft fleets and systems. Although maintenance costs of these aircraft are rapidly increasing, the option of total cost of fleet replacement (estimated to exceed $40 billion for the existing fleet of more than 600 aircraft) is deemed beyond serious consideration. The technical challenges of maintaining an aging fleet are comparable to, and in some respects exceed, those in development of new aircraft platforms and systems.

The second issue relating to aircraft maintenance and logistics centers is the need to comply with increasingly stringent environmental regulations. Large-scale industrial repair/rework operations, such as the OC–ALC, involve extensive use of solvents and other hazardous materials resulting in waste streams that must be minimized and managed. The Tinker AFB is located in an urban county that is marginal on air-quality non-attainment, and might at some time come under the appropriate Control Techniques Guidelines (CTG). In addition, the National Emission Standards for Hazardous Air Pollutants (NESHAP) provision has recently been enacted. As a result, Tinker AFB has inserted a large budgetary request for the procurement, installation and maintenance of 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 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 without increasing total emissions for the base.

The OC–ALC and other military aircraft programs and logistics facilities rely extensively on aircraft original equipment manufacturers (OEMs) and secondary engineering support firms to establish and update aircraft maintenance technologies and practices. While continuing private-sector support is a critical aspect of fleet sustainment, an independent source of alternative approaches, innovations, and new technology insertion is also essential. Furthermore, the OEM and engineering support services firms often lack the specific expertise needed at the critical time to fully support the needs of operations such as OC–ALC. Oklahoma's research universities can partner with private-sector firms to provide this timely infusion of necessary expertise under the CASI framework and utilizing DOD contracting mechanisms. Several firms have already recognized that CASI can serve this role and have engaged CASI to provide specialized and complementary expertise on teams studying aircraft and support infrastructure problems.

CASI MISSION AND APPROACH

The Center for Aircraft and Systems/Supporting Infrastructure is a revolutionary, multi-institutional, multi-disciplinary organization combining engineering, science, and business programs from Oklahoma's institutions of higher education. The CASI mission is to support the aviation community (both military and civilian) in developing and integrating promising new technologies with economics-based life-cycle engineering management methods, to assist aircraft fleet owners in substantially lowering maintenance costs, promoting environmental compliance, increasing fleet readiness, and improving safety.

CASI has been organized under the aegis of the State Regents for Higher Education in Oklahoma to provide a single point of contact for the aviation sector to access expertise at all the Oklahoma institutions of higher education. CASI is the first academic entity of its type in the nation focusing on the development of a statewide, multi-disciplinary approach for conducting applied research, modeling, technology insertion, and engineering support activities for aircraft maintenance and sustainment.

The CASI coalition includes Oklahoma's system of higher education, state government, and the military and civilian aviation sectors. The Center's faculty, students, and extensive research facilities serve as a valuable resource for applied research, technical expertise, and insertion of emerging technologies to support aircraft logistics. The comprehensive universities primarily responsible for CASI administration are the University of Oklahoma System, the University of Tulsa, and the Oklahoma State University and A&M System. These systems of higher education include main campuses in Norman, Tulsa, and Stillwater, respectively; system campuses such as Cameron, Langston, and Northeastern Oklahoma A&M Universities; and the University of Oklahoma Health Sciences Center. Regional institutions such as the University of Central Oklahoma are also involved in CASI. The CASI Board of Directors consists of Associate Deans acting on the authority of the Vice-Presidents of Research at their respective universities. The Board includes Dr. Edward Knobbe of Oklahoma State University (Executive Director), Dr. James Sorem of the University of Tulsa (Co-Director) and Dr. Thomas Landers of the University of Oklahoma (Co-Director).

CASI is positioning to support aircraft logistics centers and maintenance depots across the nation, including the OC–ALC. There are numerous expertise areas dispersed 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 such as cyclic fatigue analysis and stress-corrosion cracking.
—Modeling, simulation, and forecasting for reliability/physics of failure and logistics.
—Economic cost-of-ownership modeling and 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.
—Occupational health and bioengineering.
—Industrial and manufacturing engineering (e.g., man-machine studies, resource allocation, machining and metrology, process improvements, material handling and logistics, metrics and benchmarking).
—Information Technology in cyber-security and in the product realization and sustainment process, including digital and collaborative design, database management, and data mining.

—Avionics and ground electronics applications such as real-time aircraft health assessment, fault isolation and detection, and repair verification testing.

Immediately prior to the past fiscal year, the CASI consortium established a cost-share program designed to stimulate the collaboration of Oklahoma universities with the OC–ALC and other air logistics centers. The Oklahoma Experimental Program to Stimulate Competitive Research (EPSCoR) office, the Oklahoma State Regents for Higher Education, and the research institutions of Oklahoma all provided seed funding for this initiative. The state cost share program has fostered several new technology insertion activities with collaborating entities at the OC–ALC. During the past year, CASI faculty and students have initiated over $1,500,000 in projects supporting OC–ALC through contracts managed by firms in the private sector. Five projects in summer of 2000 initiated faculty collaboration with mission-critical programs at Tinker Air Force Base/OC–ALC in the areas of digital design and analysis and in environmental monitoring and remediation. Eleven faculty and their student assistants are also currently conducting the following nine collaborative projects of approximately one-year duration:

—Corrosion data management
—Erosion resistant ZnS coatings
—Hazardous waste treatment plant metals optimization
—Interactive web-based training of depot maintenance personnel
—Optimization of building 3001 conveyor material handling system
—Enhanced CNG (natural gas) powered vehicles
—Fuel pump test stands
—Air monitoring technologies
—Satellite imaging and 3–D visualization for air-pollution monitoring

The summer program for 2001 includes initiation of student participation and a four-fold increase in faculty participation, compared to Summer 2000. These summer projects have been defined by OC–ALC mission organizations to address a wide range of needs, including manufacturing, information technology, environmental science, avionics engineering, and business processes.

CASI is also participating in the OC–ALC Science and Engineering Career Panel (SECP) to define requirements and develop strategies for meeting OC–ALC hiring needs in these critical career fields associated with expanding workload and impending retirements during the next seven years.

CASI faculty have begun entering into strategic relationships to provide technology support for DOD systems maintained at sites outside of Oklahoma, including the Ogden Air Logistics Center (OO–ALC) at Hill Air Force Base in Utah and the Warner Robins Air Logistics Center (WR–ALC) at Robins Air Force Base in Georgia. Smaller regional universities in Oklahoma are also becoming involved in work for the DOD through CASI.

Congressional appropriations are needed to enhance CASI's existing infrastructure and sustain the growth begun in the last two years. OC–ALC is actively leading the definition and prioritization of initiatives to utilize Congressional incremental funding. Plans for investment of these funds include an expanded program of summer collaborative initiation projects, in-depth problem solving on these topics, augmentation of support capabilities at the three comprehensive universities, and aggressive expansion of statewide participation by regional universities.

PREPARED STATEMENT OF FLORIDA STATE UNIVERSITY

Mr. Chairman and distinguished members of the Subcommittee: Thank you for allowing my remarks to be made part of the hearing record.

Florida State University has four projects that we are pursuing through the Department of Defense. In the interest of time, three of these projects are detailed in my written testimony. I will briefly describe to you today our top priority project—FSU's Center for Advanced Power Systems. In addition, I would like to comment briefly on the importance of R&D funding within DOD.

Mr. Chairman, I would like to begin with emphasizing the important role defense R&D plays at universities around the country and its crucially-important role in preserving our national security.

It is widely recognized that the DOD's Basic Research (6.1) and Applied Research (6.2) accounts provide the building blocks for future advances in all defense science and technologies; continuation of a healthy science and engineering base is mandatory in keeping our military the strongest and best prepared in the world. Since World War II, DOD funding of university-based research has produced some of the most significant scientific breakthroughs and innovative technologies that include telecommunications and computing activities, advanced materials, and numerous

applications of lasers and radar that have kept our Nation at the technological forefront.

While basic and applied research (6.1 and 6.2) are the linchpins in preparing for our future, they also provide us with the ability to look beyond today's problems to tomorrow's solutions.

An excellent example is FSU's work with the Office of Naval Research (ONR) on the Center for Advanced Power Systems. I am accompanied today by Mr. James Ferner, Acting Director of that Center. I addressed this topic last year with this Committee just prior to ONR entering into a contract with Florida State University to coordinate the research for the development and testing for the next-generation propulsion systems for the Navy's fleet. Since that time, this project has greatly expanded, and we are in the midst of establishing a consortium with several other key research universities to work with us on this high priority project.

The All-Electric Ship Systems Research and Development Consortium will bring together a number of ONR-funded programs in the electric systems area to establish a team approach to focused projects involving end users, equipment suppliers, and academic researchers. A key element of the program is the effort to foster "Dual Use" technologies by structuring the consortium to include Navy, commercial/industrial and utility-based participation. The technology problems to be solved in both Naval and commercial power systems are similar and related and will benefit from a joint approach. It is expected that the consortium will become a key technical agent of the Navy in the development of the electric ship program.

Ship propulsion and energy systems are major users of manpower and energy and make up a major part of the weight and volume of a ship. Hull mechanical and electrical systems, essentially unchanged for the past 20 years, are prime candidates for applications of new technologies that would achieve weight and volume efficiencies and reduce manning costs through automation. Advances in weapons and communications technologies are placing new demands on ship electrical systems. A system-driven program of research and development in advanced electrical power technologies is essential to capitalize on the opportunities offered by the all-electric concept. Weight and volume reductions, improved reliability and survivability, and reduced manning costs are major benefits to be achieved from the all-electric ship concept. All-electric systems provide maximum opportunities for introduction of new technologies and implementation of automation.

Recognizing the long lifetime of a ship and the lead times required to develop and demonstrate new technologies, the consortium program will be focused on long-term programs with phased introduction of new technologies to provide the experience necessary to support major technology changes. First, the consortium plans to develop a strong systems simulation and modeling capability. This capability is essential in evaluating existing electric power systems, setting standards, developing control strategies, and developing guidelines for applications of existing technologies. The next step in the development roadmap will be advanced components based on well-understood new technologies that can be introduced in place of existing components in existing and new systems to achieve significant performance objectives. Finally, we will focus on development of new component and system advances that require significant research and development and prototype demonstration.

We will be requesting $19,000,000 in fiscal year 2002 to fund the activities of this consortium and to further the Navy's goals of preserving our Nation's security in the years ahead.

PREPARED STATEMENT OF THE UNIVERSITY OF MEDICINE AND DENTISTRY OF NEW JERSEY

The University of Medicine and Dentistry of New Jersey (UMDNJ) is New Jersey's premier senior academic research institution and the largest public university of the health sciences in the country. The UMDNJ statewide system is located on five campuses and consists of 3 medical schools, and schools of dentistry, nursing, health related professions, public health and graduate biomedical sciences. UMDNJ 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.

UMDNJ is home to the International Center for Public Health, a strategic initiative that will create a world-class infectious disease research and treatment complex at University Heights Science Park in Newark, New Jersey; the New Jersey Medical School National Tuberculosis Center, one of only three model TB Prevention and Control Centers in the United States funded by the Centers for Disease Control

(CDC); the Center for Emerging Pathogens at the New Jersey Medical School, which serves as a focus for infectious disease research; the Environmental and Occupational Health Sciences Institute (EOHSI), a joint venture of UMDNJ and Rutgers University, recognized as one of a select number of national centers of excellence by several federal agencies; and a statewide system of Level I and II Trauma Centers.

In addition, UMDNJ plays a dominant role in providing continuing education and outreach in all aspects of emergency preparedness. Basic and applied research among the UMDNJ campuses directly addresses the biomedical implications of biological and chemical weapons and appropriate response in the event of their use.

No other institution in the nation possesses resources that can match our scope in health professions education, research, health care delivery, and community service initiatives with state, federal and local entities. UMDNJ is an integral part of the Governor of New Jersey's initiatives with close ties to state health services and state law enforcement. Similarly, UMDNJ is closely tied to the City of Newark providing critical EMS services under contract plus involvement at other levels. Thus, partnerships are already in place to enable us to formulate a comprehensive network approach to emergency preparedness.

UMDNJ's scientific and academic expertise uniquely positions us to develop a comprehensive, statewide program to combat chemical and biological terrorist attacks through emergency response training, identification of agents, basic research and technology.

New Jersey is the most populated state in the nation and Newark, its largest city, is in close proximity to New York City; linked with this metropolis by extensive air, rail and highway commuter services. Newark Airport, the 12th largest in the United States, is a transportation hub for the entire Northeast (ranking 3rd in international trade). Over 30 million passengers travel through Newark, making the region a prime target for the possible introduction of infectious diseases.

In the event of a biological attack, our most effective measures will rely on early recognition of clusters of cases in local emergency rooms, or a sudden increase of cases reported to Public Health Departments. Physicians and other health care workers must be prepared to recognize the outbreak of disease caused by biological weapons. A dual effort is needed to improve the delivery of currently-available public health measures and to improve our ability to recognize that a biological weapon has been used.

With the strong support of this committee, UMDNJ has achieved $3,200,000 over the past two years to establish a Center for BioDefense in New Jersey. That funding will be focused on basic scientific research to understand and identify infectious biological organisms, and to classify the response to these organisms in order to develop diagnostic profiles that will lead to intervention and treatment for victims of biological or chemical terrorist attacks. We have submitted a proposal to the U.S. Army Medical Defense Research Program that will focus on DNA microarrays to identify profiles for a host response to infectious agents. We look forward to a positive response to our proposal and to beginning this important research that could have a large impact on military and civil disaster detection.

In addition to our scientific expertise, an important component of the UMDNJ-Center for BioDefense is our expertise in education and training concerning chemical and biological weapons. The nation's foremost program in education and training concerning chemical threats is located at UMDNJ. Our Center for Education and Training (CET) of the Environmental and Occupational Health Sciences Institute (EOHSI) has operated as a continuing education center for over 20 years providing environmental and occupational safety and health training through its Hazardous Materials Worker Training Center. The Center has provided training to some 175,000 individuals (police, firefighters, municipal and state employees, as well as to physicians, nurses and industrial hygienists) in hazardous materials-related topics.

Additionally, there are several Emergency Medical Services (EMS) Regional Communications Centers (RCC) in New Jersey which provide the medical dispatch and/or coordination of the state's Mobile Intensive Care Units (MICUs). However, there is no coordination of information within the 84 acute care hospitals across the state.

While emergency medical technicians and paramedics maintain state certification requirements, these do not include continued education in incident command, EMS mass casualty response training and hazardous material training.

The UMDNJ-Center for BioDefense will use the expertise at UMDNJ-University Hospital, the state's Level I Trauma Center, and University Emergency Medical Services to provide statewide leadership in the training of EMS, first responders and other health professionals and to coordinate a standard regional response to in-

cidents involving weapons of mass destruction, mass casualty, bioterrorism or public health threats.

An Incident Support and Operational Planning (ISOP) team will be responsible for training coordinated communications and response. On-site ISOP training will be provided to hospitals and EMS teams. The unit would also provide technical expertise to assist communities in the development of emergency plans and procedures. The ISOP team would organize and participate in emergency exercises at all levels of government and will become a regional resource to counties and local communities within the region.

ISOP communications would be responsible to track and disseminate statewide hospital bed status. This would be accomplished through an increase in the current technology at University Hospital's Regional Emergency Medical Communications System (REMCS) dispatch center to computerize information collection and distribution. Improvements would include: designing, implementing and maintaining a secure Internet-based status and tracking system; upgrading the existing radio system to integrate with the New Jersey State Police, the Office of Emergency Management, the Department of Health and the Department of Transportation; implementing an alert network to provide public health agencies with critical information on potential threats to the public.

The ISOP response would require hardware, software and trained personnel. The team would include individuals highly trained to respond and support large-scale incidents and with the knowledge and experience to staff various positions for all categories of emergencies. Regional response vehicles would be needed including field command vehicles, mass casualty response units, mobile decontamination units and rehabilitation units.

As New Jersey's university of the health sciences, UMDNJ is well positioned to provide the leadership and expertise to implement a statewide medical response system to bioterrorism. As part of our Center for BioDefense, University Hospital provides the E–911 EMS system for the greater Newark area, as well as the E–911 emergency Basic Life Support (BLS) in Camden. Other partners include the Level I Trauma Centers at Cooper Medical Center in Camden and Robert Wood Johnson University Hospital In New Brunswick, two of the principal teaching hospitals of UMDNJ. Members of the UMDNJ Emergency Response team participate in federally-sponsored "Weapons of Mass Destruction" education programs and play a leadership role in the City of Newark's Metropolitan Medical Response System.

UMDNJ respectfully requests funding of $2,000,000 for the Center for BioDefense to prepare, equip and train EMS personnel and other responders who are often first on the scene when a weapon of mass destruction has been employed. This funding will assist the Center's efforts to develop a coordinated, statewide Medical Response System that will strengthen New Jersey's ability to respond to bioterrorism.

We wish to again thank the Members of this Committee for their past support of UMDNJ's initiatives in research, education and training concerning all aspects of bioterrorism.

PREPARED STATEMENT OF NORTHWESTERN UNIVERSITY

Senator Stevens, Senator Inouye, and distinguished Senators of the Appropriations Committee, thank you for the opportunity to submit testimony before your committee regarding Northwestern University's efforts to help address defense-related health needs through the Institute for Bioengineering and Nanoscience in Advanced Medicine. We believe this Institute will foster discoveries in the field of nanotechnology that will be important for national security. I would also like to thank the committee and subcommittee for providing an initial $4,000,000 in the fiscal year 2001 Defense Appropriations bill for this center and request continuation funding as I will further describe.

Senator, as you know research and development at the nanoscale (i.e., at the level of atoms, molecules, and supramolecular structures) is focused upon generating nanostructures that have novel physical, chemical, and biological properties. Northwestern, as an acknowledged leader in the emerging field of nanotechnology, can make a significant contribution by addressing a range of health issues, especially those of importance to national security and the Department of Defense.

In September of 1999, the Interagency Working Group on Nanoscience, Engineering, and Technology (IWGN) published a report on its workshop held earlier that year. The report recognized the importance of nanotechnology to the technological and economic competitiveness of the United States; recommended greatly increased funding for nanotechnology research and development, especially to support university centers of excellence and their related infrastructure; and emphasized, among

other fields, the importance of nanotechnology for national defense health needs. Specifically, the report said:

"Nanoscale science and engineering promises to become a strategic, dominant technology in the next 10–20 years, because control of matter at the nanoscale underpins innovation and progress in most industries, in the economy, in health and environmental management, in quality of life, and in national security. The consensus of IWGN workshop participants and contributors is that nanotechnology will lead to the next industrial revolution. (p. xviii)

Every effort must be made to foster multidepartmental centers for nanotechnology on campuses. The most successful research efforts will be those that can create new infrastructures (for example, materials preparation and characterization facilities) for these centers. (p. xix)

Information and weapons are tools; human performance ultimately determines warfare results; improvements in monitors/controls of human physiology for performance assessment, casualty care, and susceptibility to chemical/biological agents are all important. (p. 192)"

In addition, these points echo the June 1998 report of the Defense Science Board Task Force for the 21st Century, which recommended substantial new investment in "revolutionary" technologies, including "biological/chemical technologies for BW/CW defense" and "nano-technology for computation and sensing devices" (p. 42). These priorities were reemphasized in the June, 2000, Summary of the Defense Science Board Recommendations (e.g., p. 4) and in the February, 2001, Phase III report of the U.S. Commission on National Security/21st Century (e.g., pp. VIII–IX, 3, 16).

One of the objectives of the proposed Institute at Northwestern is to advance through nanotechnology our capabilities to detect, target, and manipulate viruses, cells, and other biological agents and to apply these capabilities to medicine and healthcare. In addition to improving medicine and healthcare generally, these advances will be targeted at the Institute to the needs of national security. Miniaturized devices, when implanted in the body, could monitor health, diagnose battlefield traumas, and deliver controlled-release medications. These capabilities, plus the use of micro- and nanoscale devices for non-invasive surgery, could allow sophisticated treatment of internal wounds in the battlefield. The subsequent repair and rehabilitation of battlefield wounds could be greatly enhanced by nanostructured materials to control the rejection of artificial implants and to stimulate regeneration of damaged tissues. Nanoscale sensors could, in principle, detect and identify as little as a single cell or virus in a biowarfare agent, and artificial bioskins could protect the military from such agents while remaining permeable for respiration.

Northwestern University is the ideal location for the proposed Institute as we have been a leader in the development of nanotechnology nationwide. Northwestern faculty have published, patented, and applied numerous research discoveries in this field and Northwestern's past contributions stem from our history of interdisciplinary research. The Institute may be unique as an interdisciplinary configuration as it: is located within the Medical School and may draw upon multiple departments; and its close links with the Center for Nanofabrication and Molecular Self-Assembly, the McCormick School of Engineering, and physical and life science departments within the Weinberg College of Arts and Sciences. To accomplish the goals of the proposed Institute, physical scientists, biologists, and engineers will work side by side with clinical researchers in a medical context to develop frontier research in nanobiotechnology.

The facilities for the Institute will require the co-location of five major laboratories and state-of-the art equipment. One sector of the Institute will consist of a biological clean room facility designed simultaneously for electronic and photonic device fabrication and biological research involving the culturing of cells and growth of tissues in sophisticated bioreactors. A second sector will be a state-of-the-art laser physics laboratory with capabilities for the study of the interaction of light with biological structures and also the manipulation of biological structures and molecules with photons. The third is a nonconventional chemical laboratory with simultaneous capability for synthesis and also rapid screening of properties in novel chemicals and materials using microprobes. The fourth sector will be an imaging laboratory, in which all types of state-of-the-art microscopes, particularly scanning and electron microscopes, will be maintained in order to characterize biological structures, plus electronic and photonic devices. The fifth one will be a computational laboratory where large-scale simulations can be undertaken, including the three dimensional visualization of phenomena being studied.

These facilities provide a unique infrastructure to support the research undertaken not only by Northwestern faculty and students, but also by investigators from DOD, federal agency, industrial, and university laboratories.

The cost for construction of the Institute's facilities is estimated at approximately $30,000,000, with operating costs estimated at $3,000,000 to $5,000,000 per year. These facilities will occupy the 10th and 11th floors in the first tower of Northwestern's new biomedical research building on the Chicago campus and will be completed in three phases. Phase one, which involves construction of the shell and partial fit out of the laboratories in the first tower, will cost approximately $145,000,000. Phase two, which involves building out the space that was left shelled in phase one, will cost approximately $55,000,000. In addition to this $200,000,000, 12-story tower, phase three will add a connected 15-story tower at a cost still undetermined. When completed, the three phases will add more than 1,100 new faculty, staff, and students to the Chicago campus.

Two extraordinary private gifts totaling $65,000,000 have been donated to the building project. In addition, Northwestern Memorial Hospital has pledged $25,000,000, and Northwestern University has designated $25,000,000 of its own funds. In 2000, Governor Ryan committed $30,000,000 ($10,000,000 per year for three years) from the State of Illinois, and Northwestern requested an equal amount from the U.S. Government ($10,000,000 per year for three years). These federal funds would be leveraged more than six times over by non-federal funds contributed to the $200,000,000 cost of phases one and two.

Senators Stevens and Inouye, Northwestern respectfully requests $10,000,000 in the fiscal year 2002 Defense Appropriations bill to make this facility operational, furthering research and development of nanotechnology on behalf of defense-related health needs. We believe these federal funds will be an important impetus to help Northwestern raise $25,000,000 for the remaining capital costs for phase two and more than $100,000,000 in endowment for personnel and operating costs associated with phases one and two. We hope the committee and subcommittees will continue to fund this important facility.

Thank you for the opportunity to testify.

PREPARED STATEMENT OF JAMES L. WILSON, ATTORNEY, WILSON & DREXLER, P.C.

I very much appreciate your invitation to appear before your subcommittee on Wednesday, May 23rd to express my views with respect to the Sea Cadet and Junior ROTC programs. Unfortunately it is not possible for me to be in Washington on that date. I would very much appreciate it if you could bring the substance of this letter to the members of your committee.

Our local high school in Manahawkin, New Jersey, sponsors an Air Force Junior ROTC. I have frequent contacts with the High School on behalf of organizations in which I participate, and have had many opportunities to observe the students. The contrast between those in the AFJROTC and the other students is quite marked. The Cadets show a pride, personal organization, and general attitude that we would like to see in all of our young people.

My contacts with the Sea Cadets are less frequent, but as a member of the Navy League I have become aware of the program, and had an opportunity to see its effect. In these days of declining moral and personal standards, these and similar programs have a beneficial effect on personal organization, leadership ability, and standards, in the students themselves, and in their associates.

As a college student at the outbreak of World War II, I was fortunate to participate in the Naval ROTC; then, as a destroyer officer, in essentially all of the operations of the Fifth and Third Fleets during 1944 and 1945; then for two more years in 1950–52. Otherwise, while I am sure I would have entered the armed forces, my contribution to the war effort would probably have been negligible. It clearly also added to my personal development. I believe both of the subject programs give our best young people an opportunity to identify themselves at an early age, and that from them many of our fixture leaders will come. We should look for every way to maintain and encourage these and similar programs. They represent our best hopes for the fixture.

PREPARED STATEMENT OF LT. COL. KEVIN REGAN, U.S. MARINE CORPS RESERVE ON BEHALF OF THE OVARIAN CANCER NATIONAL ALLIANCE

Mr. Chairman and Members of the Committee: My name is Kevin Regan and I am a Lieutenant Colonel in the United States Marine Corps Reserve. Last December, my 45-year-old wife and mother of my two young children, lost her 2½ year battle with ovarian cancer. Gail was a retired Navy Lieutenant Commander who served proudly in the Medical Service Corps. In retirement, she continued to serve her Navy and her country by participating in Navy health conferences and being

selected to be a member on the DOD Ovarian Cancer Research Program peer review panel. I would like to tell you about our experience with this insidious disease and ask that the funding level for the Department of Defense's Ovarian Cancer Research Program be increased to $20 million for fiscal year 2002.

During the summer of 1998, we were living in San Diego and Gail was feeling great. She did discover though, a tiny pea sized lump just under the skin on her sternum. Her doctor was not concerned, but he offered to biopsy it. A week later we got the terrible news that it was an adenocarcinoma, primary site unknown. At the Naval Hospital in San Diego, we immediately got to see a GYN Oncologist. After an exam they squeezed her in at the last minute for a CT scan and an ultra sound. After nervously waiting through the three day Labor Day weekend, we got good news that there were no visible tumors. A few days later we received the results of her CA–125 blood test. The CA–125 test can sometimes indicate the presence of ovarian cancer. Because her CA–125 was elevated, her doctor advised doing an exploratory laparotomy. This turned into major surgery because he found tumor everywhere. He did a complete hysterectomy and oopherectomy (removal of the ovaries). Gail immediately began a 9-month course of chemotherapy followed by a 6-week course of whole abdominal radiation. She enjoyed 6 months of remission before her first and final recurrence.

As a Marine Officer, I certainly believe that our defense dollars should be spent to continually maintain and improve our military's readiness. Ovarian Cancer does adversely affect our readiness. During our ordeal, I was the only Air Officer for a reserve Marine Battalion at Camp Pendleton. Not only did I miss important training exercises, but also if my Battalion had been activated and deployed, I would have had to stay behind to care for Gail and my children.

At this time, there is no early detection or screening test for ovarian cancer. In Gail's case, even when the doctors knew she had a stage IV "something" cancer, they were not certain it was ovarian until her surgery. According to the American Cancer Society, with early detection of ovarian cancer there is a 95 percent chance of survival. Unfortunately, only 25 percent are detected early.

The Ovarian Cancer National Alliance has launched an initiative to educate women and health care providers across the nation about the symptoms, risks, and treatments of ovarian cancer. Until Gail was diagnosed, we did not know the symptoms, if we had, my children might still have their mother, I might still have my beautiful wife, and the Navy would still have a loyal and proud officer.

This year it is estimated that there will be 23,000 new cases of ovarian cancer and it is estimated that there will be 14,000 deaths. The National Cancer Institute has said that the risk of developing it increases with age, with most cases occurring in women over 50. Last year, while Gail was getting her chemotherapy at Walter Reed, she met a young Navy Petty Officer who was diagnosed at 24 years old! Her husband is also an active duty Petty Officer.

In closing, I would like to say that the Department of Defense's Ovarian Cancer Research Program is critically important. Among the first research grants is a study that is looking for molecular markers that can help detect ovarian cancer at an early stage. Other research is focusing on prevention, and we are getting results. There is now an increased understanding in the role oral contraceptives and the hormone progestin found in them play in protecting women against ovarian cancer. Because of this research, maybe soon I can tell my daughter that she and millions of other women do not have to go through the ordeal that Gail and I went through.

Thank you for your time, Mr. Chairman and committee members, I am ready to try and answer any questions you may have.

PREPARED STATEMENT OF THE JUVENILE DIABETES RESEARCH FOUNDATION INTERNATIONAL

Chairman Stevens and the Members of the Subcommittee, thank you for the opportunity to submit this testimony in support of $10,000,000 in research funding to allow the Department of Defense (DOD) to continue and expand research into biosensor technology.

I am submitting this statement in both a professional and personal capacity. My professional interest is due to my background with the U.S. military. I would like to speak predominantly about that in support of the Committee's action this last year in allocating $2,500,000 to support funding to look at noninvasive methods of assessing the health of soldiers.

Before turning to that, let me be forthright about my personal involvement. I have a son who has juvenile diabetes. He is one of 16 million people in the United States who has diabetes. I am very concerned for him, and a noninvasive method of assess-

ing blood sugars would have an enormous personal benefit to him. People who have juvenile diabetes need to prick their fingers some five or six times a day. I've determined that my son has done it some 17,000 times in the course of the 9 years he has been a victim of this disease. Anything we develop technologically that would help him or those other 16 million Americans I think would be very wonderful.

I might add that we spend about one in every four Medicare dollars on people with diabetes, so the reward financially for the public more broadly is very great.

This Subcommittee is naturally focused on the question of the military, and there my interest arises from my focus on biological warfare and on the health of our troops. As members of this body well know, the frequency of casualties for us in the military from disease is greater than the frequency of battlefield casualties from enemy fire. More people have died in our wars from health problems than have died from wounds on the battlefield.

We have now the opportunity, which is immense, to correct this or to diminish it by assessing people's health through noninvasive means while they are actually on the battlefield or preparing to go there. Two enormous technological developments are opening up the possibilities for us. We are just missing a third, and this is where the committee's funding has been particularly helpful, and I would like to encourage an expansion of that funding. On one hand, we have, first, a very good increased understanding of the metabolic processes in human beings and what is happening in blood systems and how that connects to people's health, and, second, we have the development of wireless communication technology. Your cell phones are a very good example of that technology. They demonstrate that we can get communications from soldiers on the battlefield and assimilate that information and see what is happening. What we lack is a methodology in the middle that connects these two things, that enables us to assess what it is that is happening inside someone's body without penetrating it.

When NASA, for example, sends astronauts into orbit, it frequently needs to know what is happening in their bodies. In order to find out, they need blood samples. As a result astronauts in space must frequently draw blood from one another. This is a twentieth century way of dealing with a twenty-first century problem. We can, through a variety of methods (ultraviolet detection, analysis of sweat etc.) determine better what is happening inside people's bodies, but that missing research link is not richly developed.

The Army is eager to focus on this. Last year's budget allocated $2,500,000 for this purpose. The program is just getting started now. It has solicitations out for proposals and a workshop is planned from September 5 to September 7. I think that will be very illuminating, but I would suggest two things.

First, it is imperative to continue this funding. Second, unfortunately, the amount of money available is unduly confining inquiry to government sources. Solicitations have only been asked from within the government. Because of the diabetes problem and other things, a large number of private industries are also interested in this research and if funding is available to expand the solicitation so that it reached out to private industry as well, I think you would accomplish yet more for the military and more broadly for the American public. That would cost, I think, something on the order of $10,000,000 in the year ahead, and I would encourage you to allocate that funding if you can find a way to do it.

Thank you for your consideration.

SUBCOMMITTEE RECESS

Senator STEVENS. Thank you very much.

Our next meeting will be on Wednesday, June 6, to review the Air Force programs.

[Whereupon, at 12:17 p.m., Wednesday, May 23, the subcommittee was recessed, to reconvene at 10 a.m., Wednesday, June 6.]

DEPARTMENT OF DEFENSE APPROPRIATIONS FOR FISCAL YEAR 2002

WEDNESDAY, JUNE 6, 2001

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

The subcommittee met at 10:05 a.m., in room SD–192, Dirksen Senate Office Building, Hon. Daniel K. Inouye (chairman) presiding.

Present: Senators Inouye, Dorgan, Feinstein, Stevens, Cochran, and Domenici.

Also present: Senator Craig.

DEPARTMENT OF DEFENSE

DEPARTMENT OF THE AIR FORCE

STATEMENTS OF:

HON. JAMES G. ROCHE, SECRETARY
GENERAL MICHAEL E. RYAN, CHIEF OF STAFF

OPENING STATEMENT OF SENATOR DANIEL K. INOUYE

Senator INOUYE. For some of my colleagues, this may be a day of exuberance and celebration, but I wish to tell all of you that in this committee it will be business as usual. But in a personal sense it is a bit sad, because I have become so accustomed to his face sitting here, and he has been a good chairman, and I know he will continue to be a good chairman, and so if those of you come out with the word chairman and see both of our heads turn, do not be surprised. I can assure you that we will carry on in the spirit of bipartisanship, as we have for many decades now. I have had the privilege and honor of working with Senator Stevens from the day he took his oath in the Senate, and I see no reason why this should discontinue. I can assure you that the spirit of collaboration and cooperation will continue, and I hope that this spirit will in some way enhance the mission that you are called upon to carry out.

So the committee is pleased to welcome you, Dr. Roche and the Chief of Staff, General Ryan. It is always good to see you, sir. Dr. Roche, it is my understanding that this is your first appearance before the Congress as Air Force Secretary.

Dr. ROCHE. Yes, it is, Mr. Chairman.

Senator INOUYE. I trust that this will be one of your many productive and enjoyable meetings that you have with this committee.

Today's hearing also initiates the committee's review of the military service programs. We are, of course, laboring a bit in the dark because the Pentagon's final budget request for fiscal year 2002 has yet to be submitted. Nevertheless, Senator Stevens and I felt it necessary to begin now to lay the foundation for review later this year.

With that, I can assure you that this committee remains mindful of the challenges facing the Air Force. We know of your rising operating costs that continue to plague the Service, pilot shortages become a norm, mission-capable rates are still lower than what they should be, and procurement and research and development (R&D) funding continue to get squeezed in the process.

So it is our hope, and I am sure that all of my colleagues, that the Department's fiscal year 2002 budget request and the Secretary's strategic review will meet these challenges head on. The Nation cannot afford to pass up this opportunity to fully address our national security needs for now and in the future. That is why I strongly urge you, as I will urge your counterparts in other services, not to let this opportunity slip away.

Finally, the administration last week submitted a fiscal year 2001 supplemental appropriation request addressing many of the concerns I just mentioned. While we may have some questions today regarding this submission, let me also assure you that the committee is fully aware of the pressing need for these funds. We will work to achieve a timely resolution of this matter.

Now, if I may, I would like to call upon my cochairman, Senator Stevens, for any opening remarks.

STATEMENT OF SENATOR TED STEVENS

Senator STEVENS. Thank you very much, Mr. Chairman, and I welcome your comments. I know of no American I trust more with regard to the future of our Armed Services than you, Senator Inouye, and I am delighted to be able to continue to work with you.

I want to congratulate Charlie Houy, who is now the chief of staff of the subcommittee, Steve Cortese who is with me here. We will continue to work with you. We have worked together for more than a quarter of a century now, and I do not think anyone here needs for me to extol, Senator Inouye, your background in terms of defense, but we pledge to you we will continue to work with you as we have in the past, in a bipartisan way.

I really can tell you that I have never waived in terms of my loyalty and support to you in terms of defense matters, and it has been reciprocal, so we have a working team that there should be no glitch at all in terms of defense policy as far as appropriations is concerned.

I am pleased to welcome you, Mr. Secretary, here for your first time, and while we do not have the budget yet before us, as the chairman has indicated, we do believe this is a session to get some understanding of where you are going and what we might foresee, as well as we will have some questions, as the chairman has said, on the supplemental request for fiscal year 2001. General Ryan and I discussed those yesterday a little bit.

We are anxious to get a little of your understanding of the job you have taken on, Mr. Secretary, and it is nice to have a chance

to do this early in your career. You have just come on board. There is a great deal of attention being paid to tactical aviation programs such as the F–22, the F–18, and the Joint Strike Fighter, which we discussed yesterday. General Ryan and I discussed the Comanche helicopter, and I think you will find that we are interested in a great many programs of the Air Force, particularly the tanker and air fleet problem.

We have a new strategy in our country that demands airlift to be a partner with our rapidly deployable forces, and it does seem to me we have got a change coming, a sea change coming in terms of how we approach defense policies. I will welcome the chance to review Secretary Rumsfeld's report, and I hope we get it as soon as possible. I commend you both for your willingness to serve our Nation.

I have to confess that my State perpetrated a little larceny as far as the Air Force is concerned this year. I was one of those who conspired to offer a position to former General Pat Gamble when he retired from his post as the Commander of the Pacific Air Forces to come home to Alaska. We have welcomed him, one of the significant portions of our State's economy in terms of transportation, as the head of the Alaska railroad. Your loss is our gain, and we are pleased to have a chance now to work with General Beggert, the Pacific Air Force (PACAF) new Commander. We will have to see if we cannot lure him up to Alaska in a little bit.

Senator INOUYE. It is our turn.

Senator STEVENS. He is your guy. All right. We will steal him again.

I do want you to know that I am a little worried, as an ex-pilot of the Armed Services, about the status of training and our capability to retain pilots into the future.

So we look forward to working with you on these and other matters, and again, Mr. Chairman, my congratulations, and I do not need to renew my pledge of fidelity. It is there.

Thank you very much.

Senator INOUYE. Senator Cochran.

STATEMENT OF SENATOR THAD COCHRAN

Senator COCHRAN. Mr. Chairman, thank you. Let me first congratulate Chairman Inouye on the occasion of his assumption of duties as chair of this committee. It has been a pleasure to work with him closely over the years, as it has with Senator Stevens, who has also chaired this subcommittee.

It is a pleasure to welcome Secretary Roche and General Ryan. We appreciate you being here and cooperating with our effort to fully understand the budget requests that are submitted to this subcommittee. We know that the supplemental will probably have requests for funding. I know the importance of the airborne laser program is one that has attracted attention from me and my staff. We are interested in hearing your thoughts about that program and what the future holds. We think it has great potential for protecting the security interests of this country.

We are also very proud, in my State of Mississippi, to be the home for two important Air Force active duty bases, Keesler Air Force Base in Biloxi and the pilot training facility at Columbus Air

Force Base. We also have the honor of being the State with the first Air National Guard unit to receive the C–17s. We are preparing for that. We understand the Air Force is fully supportive of this initiative. We hope that you will keep us advised closely of any training aides, or any Military Construction (MILCON) projects that we need to be aware of so we can provide the resources for that unit to do its job as a home base for the C–17s.

Again, thank you for your cooperation with our committee, and congratulations to you for your excellent service.

Senator INOUYE. Thank you very much, and now it is my pleasure to call upon Secretary Roche.

Dr. ROCHE. Thank you, Mr. Chairman, and Senator Stevens, Senator Feinstein——

Senator INOUYE. I did not see you come in.

STATEMENT OF SENATOR DIANNE FEINSTEIN

Senator FEINSTEIN. That is all right, Mr. Chairman. Congratulations, and welcome, gentlemen. I am very happy to be a new member of this committee, and I look forward to participating.

I want to just share with you my initial observations about the Air Force. I think Operation Desert Storm, and then Operational Allied Force, and the performance of the Air Force in Kosovo, really underscored its capabilities for waging high technology warfare, and I think looking ahead it is fair to conclude that the strategic environment for the next decade, and the threats and the challenges that may face the United States, are not the same as the last decade.

Secretary Rumsfeld has suggested that we need a new and integrated military posture for Asia, and I think that raises questions about what sort of Air Force structure needs to be developed and deployed consistent with this new posture and also adequate to meet the challenges of the Asia Pacific region. Obviously, I am a Californian. We in the West look West. People in the East seem to look East.

Now the Air Force is in the midst of a major modernization and transformation effort, including the development of the F–22, the Joint Strike Fighter, and the development of stand-off smart weapons. How, at what pace, and at what price this modernization program proceeds is going to impact Air Force capabilities.

So also, given the importance and, I think, growing importance of intelligence in both war and peacetime operations, there are significant challenges that face the Air Force in assessing the right mix of existing planned, manned and unmanned intelligence, surveillance, and reconnaissance aircraft to most efficiently satisfy requirements for timely and accurate information.

And then finally, there are the quality of life issues that need to be addressed, adequate funding for military construction to make sure the Air Force has the highly skilled and qualified personnel it needs, and that that personnel is able to maintain a very high morale.

I understand that with the strategic review still not complete we may not be able to get all of the answers to our questions today, but these are the areas that I want to discuss with you, and we have prepared specific questions in each one of them.

Thank you very much, Mr. Chairman.

Senator INOUYE. Thank you very much, and now, Mr. Secretary.

Dr. ROCHE. Thank you, Mr. Chairman. Mr. Chairman, Senator Stevens, Senator Feinstein, Senator Cochran, I am honored to appear before you today for the first time as Secretary of the Air Force.

I am also mindful this is the 57th anniversary of Operation Overlord in Europe. It is my sincere hope that this first hearing will mark the first of many meetings between us where we can work the work of the Air Force, and on behalf of the men and women who serve the Air Force.

With your permission, Mr. Chairman, General Ryan and I will make some very short remarks, and request that our joint written statement be submitted for the record.

Senator INOUYE. Without objection, it will be made part of the record.

Dr. ROCHE. Thank you, Mr. Chairman.

Mr. Chairman, I myself will try to answer any questions you or the members may have of me to the best of my ability, recognizing that I have only been on the job for a few days, and I have only been asking the most important questions that a former naval person would ask, where is my bunk, when does the chow line open, and when do I get paid?

In all sincerity, Mr. Chairman, although I am the tenderfoot in the room today when it comes to developing and defending this next year's budget for the Air Force, I do not expect to remain so for very long. In the meantime, I have full confidence in General Ryan and our truly dedicated and bright Air Force team to answer all of your questions, issues, and concerns. My pledge to you is that during my tenure, we will work until we have provided you with the best possible answers we can give.

Before I turn it over to General Ryan, I want to say how excited I am to have this job, to be the Secretary of the Air Force, and how honored I am to have a chance to work alongside a thorough professional, someone who I enjoy as a person, as well as a military leader, and that is General Michael Ryan. He, Mr. Chairman, is a class act. I cannot think of a better Chief to train a new Secretary of the Air Force.

Mr. Chairman, I want to thank you for this opportunity. I also want to thank you for your support of America's Air Force. The relationship between this committee and the Air Force has been key to our past successes. Maintaining and building upon these relationships I believe will be the core enablers of our future accomplishments. I look forward to working with you and the members of the committee and your staffs to help shape a very bright future.

Thank you very much, Mr. Chairman.

Senator INOUYE. Mr. Secretary, I agree with you that General Ryan is a class act, and with that in mind, General.

General RYAN. Chairman Inouye, Cochairman Stevens, members of the committee, before we get started, I would like to thank Dr. Roche for his commitment to serve as the Air Force Secretary. Although we have worked together officially for less than a week, I want to say how much I appreciate his expertise and his thoughtfulness.

READINESS

I also want to thank the committee for all you have done for the men and women in uniform over the past 4 years that I have had the privilege of being the Chief of Staff of the Air Force. During that time, we have seen a drop in readiness that has concerned us all.

With your help, we have been able to arrest that decline, but much more needs to be done to regain our edge across the board. We still need your help to attract the highest quality individuals into the military service. I am happy to say this year we are making our recruitment goals, both in terms of quality and quantity. Our major challenge is retaining our best and brightest to stay with us for a career. Your help over the past years on pay, retirement, and health care, has been much appreciated.

QUALITY OF LIFE

Quality of life issues are terribly important to attract and retain great people, but also so is quality of service, and when I speak of quality of service, that addresses the need to assure that we give our airmen the proper tools to do the tough jobs we ask them to do in places like Kuwait and Saudi Arabia and Turkey, and the no-fly zone enforcement, where combat occurs on a daily basis, and the same is true in the Balkans and Korea.

Quality of service is not just about equipment with which they operate, but the hangars and buildings and shops in which they must work. We all know quality begets quality, and as you know we have underfunded our capital equipment and our infrastructure for too long, and we must turn the aging problem around.

In summary, I look forward to working with Dr. Roche, Secretary Rumsfeld, and the Congress as we work our way through the ongoing strategic review, the quadrennial defense review, and the budgets we will submit to you in the coming months. I know together we can make a great difference for this Nation as we continue to rebuild your Air Force to meet the challenges of the 21st century.

Thank you, sir.

[The statement follows:]

JOINT PREPARED STATEMENT OF HONORABLE JAMES G. ROCHE AND GENERAL MICHAEL E. RYAN

Mr. Chairman, members of the committee, we thank you for the opportunity to come before you on behalf of the dedicated men and women of the finest aerospace force in the world. Over the past year, your Air Force has continued to protect our nation's interests across the full spectrum of operations. From contingency operations to humanitarian assistance, aerospace power has been crucial to theater commanders for providing quick and decisive actions in support of our national interests. It has been almost two years since we instituted the Expeditionary Aerospace Force—the EAF—allowing us to continuously assign and deploy Aerospace Expeditionary Forces (AEF) around the world. Today, we have almost 87,000 airmen serving overseas, to ensure the security of the United States.

Although we have the highest quality force in the world, we have significant concerns for our future. Recruiting and retaining the people we need is difficult in today's competitive economy. Aging aircraft and infrastructure have challenged our readiness. And, we must evaluate our future organization, concepts of operation, and capabilities in consideration of the changing global security environment. To address these challenges, we must recapitalize and modernize our force through emphasizing science and technology, improving our partnerships with industry, expanding our capabilities in space, and becoming more efficient in all of our efforts.

PEOPLE

Everything we do depends on the integrity, selflessness, and excellence of our people. Maintaining the right mix of both our uniformed and civilian personnel is essential to our success and our future. Your continuing support of our recruiting initiatives has helped us meet our recruiting goals without lowering our standards. That support included bonuses, adjusted pay initiatives, retirement reforms, and improvements in medical benefits, which helped us achieve our fiscal year 2000 recruiting goals, and has kept us on track again this year.

Although recruiting is important to the Air Force, we are primarily a retention-based force because we rely heavily on our highly skilled and technically experienced people. Consequently, our enlisted retention goals are the highest among the Services. With your support we have extended reenlistment bonuses, increased housing allowances, and expanded the Montgomery GI Bill benefits, helping us successfully turn the corner on first-term enlisted airmen retention—rates have been at or above our 55 percent goal for seven consecutive months. However, we must focus on achieving our second-term and career reenlistment goals. Shortfalls in these two categories have produced gaps in experience that reduce both the ability to perform our day-to-day mission and the capacity to train new recruits. We believe the stability and predictability provided by our AEF rotation schedule, together with initiatives in pay and benefits, will move us closer to our retention goals.

We've made progress on retaining our officers as well. In January, we were short by over 2,200 officers, but we are now on track to reduce that shortfall to 1,600 by September. Additionally, the aviation continuation pay program you supported, along with an overall reduction in our requirements for rated staff officers, has kept our pilot shortage at 1,200, even though the airlines have stepped up an already aggressive hiring campaign.

READINESS

We want to again thank the administration, Congress, and especially this committee for responding to the most crucial needs of the Air Force. You increased our funding to address some of our most immediate readiness concerns this past year, enabling us to arrest our recent readiness declines. Your support of the fiscal year 2001 supplemental will further help us maintain our readiness levels. However, we still need your continued support to improve our readiness.

Your United States Air Force is currently operating and maintaining the oldest fleet in our history. On average, our aircraft are about 22 years old, and getting older. An aging fleet costs more, both in effort and dollars, to operate and maintain. Last year, while we flew only 97 percent of our programmed hours, they cost us 103 percent of our budget. Over the past five years, our costs per flying hour have risen almost 50 percent.

AGING INFRASTRUCTURE AND PHYSICAL PLANT RECAPITALIZATION

Maintaining our infrastructure and physical plant is another significant challenge. Over the past decade, constrained resources and competing requirements have forced us to use infrastructure as a bill payer. Your military construction budget adds have helped, but still leaves our plant replacement rates far short of the industry standard. Today, our military family homes average 37 years old, while our plant facilities are 40, and we have a real property maintenance backlog of $5.6 billion. The growing repair costs of our aging facilities directly affect our ability to provide a quality work environment for our people, further contributing to our retention and readiness challenges.

MODERNIZATION

As noted above, our aircraft are getting older. In fact, in just 15 years their average age will be nearly 30, even if we execute our planned modernization program. Old aircraft need more frequent and substantial repairs, driving up readiness costs. This, in turn, reduces the number of aircraft available for missions, making higher demands on the remaining fleet. Our space-based systems, space launch systems, and space ranges are caught in a similar vicious cycle.

Pending the results of Secretary Rumsfeld's strategic review, we need to aggressively modernize our capabilities. Advances in continuous global surveillance, directed energy, and unmanned aerial vehicles will be coupled with our ongoing aircraft, precision-guided munitions, information, and space initiatives to radically enhance the application of aerospace power. The Air Force of the future will continue our tradition of innovation to assure we can meet and exceed the expectations of the nation.

CONCLUSION

In the short-term, we are challenged by the problems of recruiting and retaining a quality workforce in a competitive economy and improving our readiness impacted by an aging fleet and decaying infrastructure. In the long-term, working with you, the Office of the Secretary of Defense, and the other Services, the Air Force will evaluate the most appropriate aerospace strategy for the evolving security environment. We will find better ways to organize, while improving the effectiveness and efficiency of our processes, including leveraging the best business practices found in both government and industry. Finally, the Air Force must pay special attention to the shrinking military-industrial base and evaluate ways to improve its current acquisition processes.

The statements made in this testimony are contingent upon the results of Secretary Rumsfeld's strategic review. We ask you consider them in that light.

BIOGRAPHICAL SKETCH OF DR. JAMES G. ROCHE

Dr. James G. Roche is the 20th Secretary of the Air Force. In this role, he is responsible for the affairs of the Department of the Air Force, including the organizing, training, equipping, and providing for the welfare of its nearly 355,000 men and women on active duty, 180,000 members of the Air National Guard and the Air Force Reserve, 160,000 civilians, and their families. As head of the Department of the Air Force, Secretary Roche is responsible for its functioning and efficiency, the formulation of its policies and programs, and the timely implementation of decisions and instructions of the President of the United States and the Secretary of Defense. With an annual budget of approximately $71 billion, he ensures the Air Force can meet its current and future operational requirements.

Prior to this appointment, Secretary Roche held several executive positions with Northrop Grumman Corporation, including Corporate Vice President and President, Electronic Sensors and Systems Sector. Prior to joining Northrop Grumman in 1984, he was Democratic Staff Director of the U.S. Senate Armed Services Committee.

Secretary Roche's previous military service spanned 23 years in the United States Navy, retiring with the rank of captain in 1983. As a naval officer, his assignments included Principal Deputy Director of the State Department's Policy Planning Staff; Senior Professional Staff Member of the Senate Select Committee on Intelligence; and Assistant Director for the Defense Department's Office of Net Assessment. He commanded the U.S.S. *Buchanan*, a guided missile destroyer, and was awarded the Arleigh Burke Fleet Trophy for the Navy's most improved combat unit in the Pacific in 1974.

Secretary Roche has served as a member of the Secretary of Defense's Policy Board and is a member of the Council of Foreign Relations and the International Institute of Strategic Studies. Dr. Roche has been awarded various campaign ribbons and military medals, including the Legion of Merit.

RECRUITING

Senator INOUYE. I thank you very much. General, one would expect the committee to begin its inquiry with weapons systems, but Mr. Secretary, we believe that the most important element in the Air Force would be the personnel.

In fiscal year 1999, we had problems in reaching the mark. In fiscal year 2000, we did meet our mission, but at extra cost. I note that in the budget there is a request for $33 million. Can you tell the committee what sort of new program you may have in recruiting and retention?

Dr. ROCHE. Mr. Chairman, I will defer to General Ryan on what may be in the budget. I can tell you that my second goal—when I was confirmed I had four principal goals, one was to work with the Air Force to adapt a strategy for this millennium. This is the first year of the new millennium. The second was careers, because I believe if we can work on the retention problem we will also be helping our recruiting problem.

We are losing people in mid-career, and that means that we have to address that. This committee and the Congress has helped in financial terms. I think there is more we can do in terms of career planning, mentoring, a number of other things, and General Ryan and I are of one mind on this. We are both seized with the fact that we invest an enormous amount of time and money in these very high caliber people. We cannot have them leave us. We just cannot have them leave us the way they are leaving us, and so we intend to make this a major effort for the Air Force in the next couple of years.

Principally on retention, we believe a force that retains is a force that will attract.

Senator INOUYE. General.

SUPPLEMENTAL APPROPRIATIONS

General RYAN. Yes, sir. In speaking directly to the question on supplemental increases we asked in the area of personnel, people programs, was a very large request in that supplemental—$400 million to take care of our health shortages that we had this year, payment for health needs.

Also on the people side, it went toward our basic allowance for housing (BAH) that we need to continue to fund, along with offering bonuses to many of our folks that we have a hard time retaining—quite honestly, using those budgets to supplement their incomes to attract folks to stay for a second and third tour in the United States Air Force.

We also had upped the number of recruiters and recruiting programs. So that is primarily where that money is focused.

Senator INOUYE. I was just advised that the joint leadership of the Senate wants all of us to assemble in the Senate by 11:15. I believe there is an important announcement on reorganization, but we will continue here.

F–22

May I inquire about the F–22, General? It is still the cornerstone, I believe, of Air Force modernization. We have had cost problems, test problems, uncertainty as to the total number. What is the present situation? I realize we do not have the budget request before us, but what do you believe we can anticipate?

General RYAN. Yes, sir. Currently, the program is structured around the buy of 339 aircraft, F–22s. We are studying in this strategic review the number of those kinds of capabilities that we need for the future, and what will meet those needs.

As you know, the F–22 is a huge leap in capability, an airplane that can supercruise at well above 1.5 mach, has very good legs, has stealth capabilities that are revolutionary, so the need for this airplane I think is very clear. The numbers will be the question as we go through this review.

It is in testing right now, as you know, and doing very well. In fact, its signature, its capability to supercruise, its avionics capability, and its aerodynamics capabilities are right on the mark, as we predicted them, in fact, are better.

We are behind in testing, but testing is something you do not want to rush. It is not something that you put a time line to. What

you do is, you put events to, get through events so that you do this very structured way, and so I think the program is in very, very good shape. We are behind in testing, but we are not going to rush that at the expense of safety, or missing something as we develop this airplane.

Dr. ROCHE. If I may, Mr. Chairman, I absolutely agree with General Ryan, the F–22 has the character of really altering war. It is the first time we have had the capability to be over an enemy's territory for any length of time, and because of supercruise and dramatic avionics, to be able to clear the skies. We think that will be important for the long run. Also, it will have the capacity to do certain attack missions which will be rather unique.

The test program has been reviewed because of the cost caps in the Engineering and Manufacturing Development (EMD) part of the program, and once reviewed, an outside group was brought in to take another look at it, and we felt, and General Ryan and I completely agreed, to add back different tests in order to make sure that this system is exactly the way it ought to be for the price that we are paying for it and for the program in general.

F–22 TESTING PROGRAM

Senator INOUYE. Not wishing to rush the testing program, but about how long do we have to wait?

General RYAN. Well, we will probably be delayed in our EMD, which was supposed to end its testing in the November time frame. We think we are going to be 6 to 7 months delayed to get through all the test points that we thought were important to make sure it was ready to go into operational test and evaluation. That is about the magnitude of the slip.

Part of that is due, quite honestly, to the fact that we received the aircraft late for a number of producibility reasons, but that is the reason that you go through the engineering and manufacturing stage, to make sure you nail those before you bring this airplane on in production, and we think we have it pretty well nailed now. We just want to make sure this testing is done to the degree that we have great confidence that the airplane will be produced as the great war machine it is going to be.

Senator INOUYE. Thank you. Senator Stevens.

Senator STEVENS. Thank you, Mr. Chairman.

C–17

As I indicated in my opening statement, I am a little worried about the C–17. We originally thought we were going to get 210. I think we have got somewhere around 80 now. We had a procurement rate for this fiscal year of 2002 that we are working on, 15, but I am told that the outyear profile indicates just 9 for 2003, 4 for 2004, and then back up to 8 in 2005. The stability of that line, it worries me a great deal, and I wonder about that.

MOBILITY REQUIREMENTS STUDY

My staff tells me that the mobility requirements study for fiscal year 2005 established a 54.5 million ton mile per day requirement, against a Department of Defense (DOD) capacity at the present

time of 49.7, if it had 127 C–17s. In fact, the outside study says that probably we would require another 50 in addition to the 120.

Further, I am informed Boeing has offered to sell the Air Force 60 C–17s on a multiyear procurement at a rate of $152 million per aircraft, a favorable rate compared to the past.

Have you got currently, General, an estimate of the requirements in this period of time that we are talking about, fiscal years 2002 through 2005? What do you think the requirement really should be?

General RYAN. Yes, sir. The number you quoted out of the mobility requirement study 2005 was derived by looking at two major regional contingencies and then seeing what kind of airlift requirement during the search periods were required to be able to fight those regional contingencies with a high expectation of winning.

MULTIYEAR PROCUREMENT

The number of aircraft we currently have in the program are 120 on a multiyear procurement and then another 15 that we have added to the budget but have not been able to go forward yet and get a multiyear procurement on, and the reason we have not, and we need to do that this year, is the additional requirement that driving us from the 49.7 to the 54.5 million ton miles per day has produced.

Quite honestly, that number is almost independent of two near simultaneous, because we do not have an airlift force structure that can do two wars at once. We have a one airlift force, and so whether in our strategic review we change the paradigm from two major contingencies to one, and a series of smaller conflicts, will probably not make much of a difference in the demand for airlift at the high end and high time during these conflicts. So as we work our way through here, we are looking at how many more C–17s we would need to meet that requirement. For every, about 0.1 million ton miles per day, you can add a C–17, so 50 is not off the mark if you want to meet the total requirement.

We do not meet the total requirement in a lot of other places where we have specified it, so this will be, for us, during the strategic review and then during the Quadrennial Defense Review (QDR) that follows, one of the main topics of how much more airlift can we afford, how much more do we need, and what are the risks between those two?

MULTIYEAR PROCUREMENT SCHEDULE

Senator STEVENS. Have you had a chance yet, Mr. Secretary, to take a look at this question, and what we should do about the offer of Boeing on the multiyear procurement schedule?

Dr. ROCHE. With respect to this particular offer from Boeing, Senator Stevens, I have not, but I have looked at the C–17 program in general, and it is a very good program. The plane is doing very, very well.

One of the things that Secretary Rumsfeld is having us try to think through is, if we go and look at just the two Major Theater Wars (MTW's) it tells you one thing, but in fact our forces are being used in other ways, as well as having to be prepared for that, and the sizing criteria may be more appropriately done if we pick

up some of these other requirements to be in Northern Watch, Southern Watch, Kosovo, et cetera.

My sense is that airlift will be something that will not be shunted in this. It is one of those capabilities that is in great demand, and our sense is the C–17 is a winner, and I think that we would like to look for more of them.

AIRLIFT REQUIREMENTS OF OFFSHORE STATES

Senator STEVENS. Gentlemen, the chairman and I come from the Pacific. By just our geographical location we are concerned about the Pacific. We provided in fiscal year 2001 $3.5 million for planning and site assessment for both Hawaii and Alaska major air bases just before stationing C–17 in support of the rapidly deployed forces in both Hawaii and Alaska.

Mr. Secretary, have you looked at that in terms of this current strategic review with regard to the airlift requirements of the offshore States?

Dr. ROCHE. No, sir, I have not yet, but clearly as we go through the Quadrennial Defense Review and if, I believe we will give the rebalancing to the Pacific that has been discussed, then certainly that will be an issue and we will be looking at, and getting back to you on it.

Senator STEVENS. Well, General, can you give us an update, if you do not have it now, for the record, anyway, of the initiative that was in the 2001 defense bill, and the infrastructure requirements for the future that would be necessary for carrying out that initiative?

General RYAN. Yes, sir, and I will get back to you on the record on what we have done to do the surveys that were in that request.

Senator STEVENS. It seems that our forward-deployed forces would be stranded forces unless we have C–17 capability. I know of no other airlift that would be available in the future to take the forces there on a forward-deployed status into the Pacific region to meet crises, unless we have C–17s. Do you agree with that statement?

General RYAN. Yes, sir. How quickly we can—we can get the C–17s to most locations before the forces can be generated, so I agree with the statement that we do need to be able to rapidly move our forward-deployed forces into the areas that we have planned for them to fight.

C–5

Dr. ROCHE. But I think the General will agree, Senator, that it is not just the C–17. We have other assets like C–5s. We will put personnel in 747s. The whole lift is a large portfolio of capabilities, but the C–17 is clearly a winner in this portfolio.

Senator STEVENS. The C–5s are not on either Hawaii or Alaska, either. They would come in from Nebraska.

Dr. ROCHE. But they would be bringing a lot of stuff from CONUS going forward, too, sir.

Senator STEVENS. But our forces are in Hawaii and Alaska, forward-deployed to go out to the crisis first.

Dr. ROCHE. Yes, sir.

Senator STEVENS. Unless we have some airlift, what is the use of having them there?

Dr. ROCHE. We agree, sir.

KC–135 TANKERS

Senator STEVENS. On tankers, I am also a little worried about the tanker situation. We currently have 550 KC–135 aircraft, about one-third of that fleet is in the depots for maintenance repair, one-third of the fleet is nonmission capable on any given day because of the ages of the 135, both age and corrosion and depot-time and costs are exceeding the Air Force's projections now by a factor of three. It really means we are spending more on these aged aircraft, on keeping them going, than we would spend if we started a line to procure new tankers.

Boeing again—and I am no stockholder in Boeing. They used to be my neighbor. They are moving now, as a matter of fact, but they are offering the 767 tanker, which has a great potential for the future. What about that, General Ryan? What is the challenge of the KC–135 maintenance, and aging situation, and what do you think about a commercial derivative tanker?

General RYAN. Yes, sir. First of all, the aging issue. The average age of our KC–135 fleet is 38½ years old. They were built over approximately a 10-year period. That means that as we come to the time when they become no longer viable, it will happen over a 10-year period. Tankers will be a requirement for the foreseeable future. I see no technologies out there that will allow us to decrease the amount of tanker force we need to project power around the world.

Our 135 fleet is costing us more to put through depot. It takes us almost three times as long as it used to, because every time we open the airplane up we find some structural problems that we need to fix, and we have a vanishing vendor base for putting onto the airplane older systems that they have on them today. That is why we have upgraded the airplane in many ways over the years with a modification we call Compass Radar and GPS (Pacer CRAG), which did the avionics in it.

We have reengined most of them with the CFM–56 engine, but this airplane eventually is going to have to be replaced, so we are looking out in about the next 15-year time frame to begin that replacement. We have an offer from Boeing that was given to us on a 767 derivative, which we are evaluating.

BOMBERS

Senator STEVENS. Mr. Chairman, I could go on and on on this problem. The bomber situation is the same. We are still maintaining the B–52s that Harry Truman fought the Congress over and bought, and we have cut down our B–2 line to a perilously low figure. I think it is closed now almost, is it not?

Dr. ROCHE. It is closed.

Senator STEVENS. No new production, and yet it is clear that the cost of trying to maintain these aging aircraft across the board for our Air Force are eating our lunch. We are not getting anything new, and it is costing more and more to repair the old ones.

I hope that this review that the Secretary has going on really emphasizes, really looks at and emphasizes the problem of aging aircraft, and our readiness capability. One-third of the tankers cannot get off the ground, and you do not have enough to start with. I think that is probably—the aging problem for our Air Force is, next to the pilot retention problem, the two greatest problems for the Air Force. I hope we can work together on it.

Thank you, Mr. Chairman.

Senator INOUYE. Thank you. Senator Cochran.

AIRBORNE LASER PROGRAM

Senator COCHRAN. Mr. Chairman, thank you. I mentioned my interest in the Air Force's Airborne Laser Program, and I would like to have your reaction to the importance of that program to our Nation's security. I also note that the supplemental has a request in it for $153 million for the program. In part it is to pay for additional costs that were sustained because of a technical problem that has now been overcome, I am told, and also in part to pay for work that has been moved forward on the schedule.

They are projecting an intercept effort in fiscal year 2003 time frame to keep that program on schedule. I understand that we need to try to make up for some of the cuts that had been imposed on that program in the last administration. Some $500 million had been removed from the outyear budget projections.

What is the need, as you see it, for our support for this program to keep it on schedule and to help make sure that it maintains the goals that have been set for it by the programmers?

General RYAN. Yes, sir, as you know, we did in the supplemental put in 153 more for the airborne laser. We think it is a revolutionary capability. We think to be able to put a high-powered laser, to be able to acquire, track and destroy missiles in their ascent phase is terribly important to future capabilities in defense and force protection.

We also think it may have some other capabilities, too, that we have not really addressed, and so far we think we know the physics of all this. It is the engineering that we are struggling with as we build the first prototype to be able to have the shoot-down that you mentioned in, we say calendar year 2003. That gives us a little more wiggle-room on the back end, but we certainly want to do that and hold to that schedule, and hence that is the reason that we put more money into it.

We think this is revolutionary capability, and it also helps us with other kinds of applications of directed energy, because the pointing, tracking focus of the energy can lead us down a lot of paths that will revolutionize some of the ways we wage war.

X–33 SPACE PLANE

Senator COCHRAN. There is another program that has been supervised and operated by the National Air and Space Administration (NASA) up to now—it is the X–33 program. It is the space plane, so-called by some—the engine testing occurs down at the Stennis Space Center in Hancock County, Mississippi. It seems to me that this is a program that affords the Air Force an opportunity to assume stewardship of a program. NASA has not got a proposal

for continuing this program, even though it is 75 percent complete. Ninety-five percent of the parts for the space plane have been delivered. The investment to this point is $1.3 billion.

What I want is your reaction to having the Air Force assume stewardship of this program, and carry it forward. Mr. Secretary, do you have any opinion about that at this point?

Dr. ROCHE. I have two preliminary opinions, Senator. One is that in capability, this could be a very interesting system. This is the sort of research you do now that you work on for a very long time in order to develop a capability. It is an investment in the long term future. It has to trade against other priorities. Mr. Goldin and I are going to be meeting on this, and I am sure this will be one of his main topics in the next couple of weeks.

PILOT TRAINING BASES

Senator COCHRAN. My last question has to do with pilot training bases. When we went through the last base closure round, Base Realignment and Closure (BRAC), we were told that the base at Columbus, Mississippi, was the number one pilot training facility in the country, according to the Air Force, and there are now three bases being used by the Air Force for training pilots. I am told that there is a shortage of pilots, that we have classes that are full. The special under graduate pilot training bases are operating at maximum capacity right now.

What occurs to me is, if we have a base closure round, would the Air Force consider suggesting that there be certain classes of facilities that would not be included in the request for closure?

I mean, if we know going in that we have a shortage of facilities for trained pilots, why would you put a pilot training facility at risk for having to go through the agonies that these communities go through to say this is an important facility, the community supports it and all the rest, when we already know all that? Why go through the business of the stress and strain of base closure with those facilities? Could you not just exclude them as a class?

General RYAN. First, you are absolutely correct, Senator, that we are in a pilot deficit in the United States Air Force to the tune of about 1,200 pilots, about 9 percent short. We are at mass production now on pilots, with the infrastructure that we do have in our training bases. We will continue to produce pilots, because it is not only an Air Force need, I believe it is a national need, and Senator Stevens and I have had this conversation about the national requirement for pilots.

On the base closure side, I think that we need to look at not just the present, but well out in the future, if we do have a base closure round, to make sure that the bases that we have meet all the requirements we need for the future, and that is nonencroachment by housing, places to operate the aircraft in air space that is near the air base, having ranges that are close by that we can operate in and that we can figure for the next 50 or so years we will be able to operate those bases, so we take all that into account as we look at the training bases. The training bases, for sure, are very, very important to us.

Senator COCHRAN. Thank you, Mr. Chairman.

Senator INOUYE. Senator Feinstein.

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

Mr. Chairman, if I might, I have got 22 questions. I would like just to submit them to you and perhaps the General could answer them at his convenience, which hopefully will not be too long off.

NEW THREATS AND MISSIONS

General, let me ask you this question. How do you characterize the new security environment, the new threats, the missions that the Air Force might face in 2015, 2020, using the last decade as a frame of reference? What additional capabilities, what additional changes in posture or structure do you feel will be necessary to assure that the Air Force can perform at high level?

General RYAN. First of all, if you go back 15 years, you would find it very hard to find any consensus on the prediction of what would happen in the next 15 years.

Senator FEINSTEIN. But take the Balkans, take the Middle East as examples of use in a regional conflict.

General RYAN. Right. I would say that we lost our reliable enemy against which we force-structured during that time, the fall of the wall, the crash of the curtain. We never predicted that we would be in a major theater war in the desert. We certainly did not predict that we would have two major air operations that occurred right in the middle of Europe, in both Bosnia and Kosovo. We never thought that we would be in those locations still.

So predicting what is going to happen in 2015, I think takes a lot more than a ouija board and looking back on the past decade, but the past decade does give us some clue about the kinds of capabilities that we will need for the future.

I think there is no question that this Nation of ours will be involved worldwide globally in its economy, and our prosperity will depend on the stability of this world, that of not only the United States but our allies and our friends and trading partners, and that we, the superpower, will be called on in the future, in a very uncertain future, to try and quell conflicts and fight wars, if necessary, and so our ability to move rapidly is, I think, the first piece of a capability-based strategy for the future, and our ability to have systems that can operate across the spectrum, from humanitarian operations all the way to major theater wars are terribly important.

Our ability to reach far will be important, our ability to have vigilance around the globe will be important, so it is those kinds of systems that we are looking at in this Quadrennial Defense Review we are about to enter in the strategic environment. I think that aerospace power will play a very large role in that future world no matter where the challenges come from.

TERRORISM

Senator FEINSTEIN. Let me ask you to include in that an asymmetrical threat, irregular force, militias, terrorists—I serve on the Technology and Terrorism Committee, and on Intelligence—and one of the issues that has been emerging in reports is a very deep concern about the impact of terrorism in the future in the United States. What role do you see the Air Force playing to prepare for such a thing?

General RYAN. I think that we do have a huge threat that is very hard to define, because we are an open Nation. Our security precautions are balanced against the rights of the individual in this Nation to have the freedoms that this Congress has given them.

I think that it will be terribly important that we in the future are able to focus on groups, and provide information on these groups around the world, to be able to have the tell-tale signs that something is going to occur. I think that those kinds of abilities, and then dealing with them as the event approaches, moving rapidly to stop it, to prevent it, to deter it, will be issues that we have to put a lot of thought to because of the balance against the freedoms that we have in this Nation.

The Air Force's involvement in that will probably be, quite honestly, in the rapid movement to different areas, whether it is to deter it, to quash it, or to deal with the consequences of a terrorist act in this Nation.

Dr. ROCHE. Senator, if I may.

Senator FEINSTEIN. Please, Mr. Secretary.

Dr. ROCHE. I agree with General Ryan. It is interesting, the number of questions you have asked, and the last two questions, are key ones that Secretary Rumsfeld has been asking both of us and our colleagues to grapple with, including the asymmetric ones and terrorism, and this is terrorism outside, this is terrorism inside. What do you do if something happens inside the United States? What is the role of the military in what is otherwise thought of as a police action? How can we support other agencies?

But it is clear that the business of the Air Force is global reconnaissance and strike, and while we do not talk about it very much openly, our space programs, and the Air Force space programs, and now we are the executive agent for the building, for the Pentagon in space, we will be providing a lot of intelligence, a lot of situational awareness to ourselves and to the other services and to decisionmakers, so the Air Force's role in this subject is, in fact, going to be an increasing one, not a decreasing one, and then we will have situations where the strike part of global reconnaissance and strike may be called upon by the President and we will be prepared to take that action, too.

B–2

Senator FEINSTEIN. One last question and then I will desist. I followed the B–2 with some interest, and followed its work in Operation Allied Force. What is your assessment of the performance of the B–2, and has this assessment in any way changed the way the Air Force is thinking about the role that the B–2 may play in the future?

General RYAN. Our assessment was, the aircraft performed almost flawlessly. It was able to perform a mission 32 hours in duration, flying a round robin from the United States to Kosovo and back, and executing very, very well. It is a centerpiece, quite honestly, of our capability to project power now, and it will be in the future.

Senator FEINSTEIN. The reason I asked is, you know, when I came to the Senate, it was: "the silver bullet," and then that dropped way to the bottom shelf, and maybe cost was part of that

assessment, but it no longer was a priority for the Air Force. Are you saying that it has become a priority for you?

General RYAN. It is a centerpiece of our current force. We have 21 B–2s operating in the force today. They are in every operation that we conceive in the future, where we have major combat. It will be part of that force.

Dr. ROCHE. And, ma'am, there are extensive upgrades being planned for the B–2 both in avionics, and also to put smart munitions on board.

It is in the not-too-distant future where 10 of these aircraft can drop an enormous amount of weaponry in one pass, each weapon being very, very accurate, and then we have plans going even beyond that to smaller, even more accurate weapons, which will make each B–2 sort of like an aircraft carrier in the sky in terms of what it can do.

Senator FEINSTEIN. Thank you. Thanks very much, Mr. Chairman. I appreciate it.

Senator INOUYE. Thank you. Senator Craig.

Senator CRAIG. Mr. Chairman, thank you very much.

Let me ask unanimous consent that my full statement be a part of the record.

Senator INOUYE. Without objection.

[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 congratulate Dr. James Roche for being newly confirmed as Air Force Secretary, and thank Air Force Chief of Staff, General Michael Ryan for the support the Air Force has given not only Mountain Home Air Force Base, but the research and development initiatives at Idaho's various universities. I believe that Idaho's shares a unique partnership with all military men and women, who are committed to our nation's defense and make daily sacrifices in the service of their country.

However, our status as a super power shouldn't make us complacent. Our nation must consider future vulnerabilities. As national centers of academic excellence in information assurance, the University of Idaho and Idaho State University look forward to working with the Air Force in preventing cyberbased disruption and attacks.

But, let us not forget the accomplishments of our "gunfighters" of the 366th wing. We in Idaho our proud of the Air Force's premier Air Expeditionary Wing, and want you to let us know if there is anything that we can do to support the base.

I believe that Mountain Home is key to the Air Force being able to implement the expeditionary aerospace force structure. As the home of the Aerospace Expeditionary Forces Battlelab and the enhanced training range, they are critical to achieving operational readiness, which is essential to air superiority. Because of the battlelab, they able to identify and rapidly proves the value of innovative ideas for the aerospace expeditionary forces throughout the full spectrum of warfare. The enhanced training range provides realistic, flexible, and efficient training scenarios while minimizing environmental impacts associated with readiness training. I feel that our training range is a premier air combat range which is efficient, cost effective, and most importantly, will allow the men and women of this nation's military to prepare to fight the next war, not the last, with fewer combat losses through improved training.

I commend the Air Force for 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 are addressed and effectively handled. I encourage you to let me know if there is anything that I can do to assist the Air Force with any issues that might come up.

As I have mentioned to Gen. Ryan, in our meeting a few weeks ago, I am pleased to see that Mountain Home Air Force Base is being considered for the beddown of the F–22 raptor. I hope that the Air Force would consider us for the next beddown

location. As the home of the expeditionary aerospace force, which is the first to deploy anywhere in the world when a conflict erupts, the battlelab, and the newest and best day-to-day training range in the United States, Mountain Home Air Force Base is the most logical choice for bedding down an F–22 unit.

As both of you gentlemen know, the global strategic landscape is constantly changing. Not only are American forces required to project themselves further and faster than ever before, but the threats they encounter are changing as well. Regional powers such as Libya, Iran, Iraq and North Korea continue to update their arsenals with new technologies, which could pose a threat to our forces and to our allies in the future. U.S. military technology must meet the challenges that these regional threats could pose.

This is particularly evident in the areas of surface-to-air missile (SAM) technology and fighter aircraft technology, the best of which is designed by the Russian Federation and then sold to some of these regional threats.

That is why it is so important that we support the production and deployment of the F–22. With its superior flight characteristics and stealth technology, the F–22 will enable us to maintain our air superiority, which will serve as an additional deterrent to potential regional threats. And while the new Joint Strike Fighter will be a valuable asset in the years to come, it should not be viewed as a substitute for the F–22. Therefore I urge my colleagues not to short-order vital equipment like the F–22.

MOUNTAIN HOME AIR FORCE BASE

Senator CRAIG. General Ryan, it is good to see you again, and congratulations, Mr. Secretary. I am pleased you are in front of us today as our confirmed Air Force Secretary and I want to invite you to come sit down with me and the Idaho congressional delegation along with General Ryan in order to put the final touches on what we think and what I know you know is a premier training range that has just been expanded in Idaho at Mountain Home Air Force Base.

We really have not finalized all of the details in working with some of our Federal land agencies. I want to get those complete, get the new Director of the Bureau of Land Management (BLM) in to make sure that it is complete, and that there is no attempt at further encroachment into that facility, because, as I think we all know, it is really a grand opportunity both in air space and good weather flying time, and now with their new high tech facilities, the capability of the Air Force can expand through that training. I want to do that, and do that as soon as possible.

I was at the base last weekend to meet our new commander and to look at the facilities, to look at the 366 Air Expeditionary Wing, and all of its flexibility, and I think we are all pleased with the performance of that facility and that wing.

F–22 BEDDOWN

I must also tell you that we are preparing to make a very good case for the next bed-down location for the F–22s. We will keep putting that on the record as we work with all of our colleagues, because we see that as a valuable mission and resource for the Air Force, and I am pleased that you think we can compete for that mission effectively.

Mr. Chairman, I do have to get to the floor, but I do want to thank both of you. I look forward to working closely with you, Mr. Secretary, and getting to know you better, and getting to have you know the only major military installation in the entire State of Idaho, Mountain Home Air Force Base, and how much we appreciate its presence there.

But we thank you and, General, thank you for being here.

General RYAN. Thank you, Senator.

Dr. ROCHE. Thank you.

Senator INOUYE. Thank you very much. Senator Domenici.

Senator DOMENICI. Thank you very much, Mr. Chairman. I understand that I missed a marvelous pledge of bipartisanship that you all have made on behalf of this committee towards the defense of our country, and I thank you both for that spirit, and hope that I can be one who is a team player on board.

Mr. Secretary, I do not know you very well, but welcome.

Dr. ROCHE. Thank you very much Senator.

Senator DOMENICI. General, it is good to see you again.

BUDGET INFORMATION

Mr. Chairman, have we asked the witnesses when we might expect the budget information that would permit us to do our work?

Senator INOUYE. Not specifically.

Senator DOMENICI. Might I ask?

Dr. ROCHE. Senator, I came to this hearing from another meeting at the Pentagon. We are trying to put together the amended budget so as to show Secretary Rumsfeld when he returns from Europe. I certainly cannot speak for the whole Department as to when it will come over. I know that there is intensive work on it right now, for the amended 2002 budget.

Senator DOMENICI. You understand that the way the budget is now, that is, the budget plan, you are currently plugged in for the President's number, but this committee can wait for you to present the new approaches, at which time they have authority to accept it all in toto, or sum, and it would be added to their allowance. That is the way we are expected to do things.

So it seems to me that while it is very important to rethink the entire military from top to bottom, or whatever is going on, it is pretty important that we know what is expected of the Congress this year at a reasonable time.

Dr. ROCHE. Yes, sir, I understand, and we have a couple of things going in parallel. We have the supplemental, and the philosophy the Secretary has asked us to follow is to use the supplemental to just try and stop any bleeding that there might be in maintenance, to try to restore the flying hours, deal with our contractual operations for the most part.

FISCAL YEAR 2002 BUDGET

His philosophy that he has instructed us to work on so far on the amended 2002 budget is to try to get to a position where we will not be managing by supplementals year after year after year, but to try and put things right so as to be on a solid business foundation for the 2002 budget, and then as to whether or not there will be decisions associated with the longer run on programs in the 2002 amended budget, or wait until the 2003, is something he has not yet decided, but we are striving to put this on a businesslike basis so that when we come forward with an amended 2002 budget, we will not have to worry about hitting you with a supplemental, unless real reasons for a supplemental come about, sir.

Senator DOMENICI. Mr. Chairman, I have a summary that I would like to put in the record, and some questions I would like to put in the record, and I would assume that with the new Secretary this has been an opportunity for Senators to brag about their States in reference to being partners with the Air Force.

Dr. ROCHE. Properly so, Senator.

Senator DOMENICI. I just want to say that I do not want to do that today, because I would have to take up too much time of the committee.

I do want, however, to remind both of you that not only do we have Air Force bases for America here, but we have Air Force bases where we train Singapore pilots with airplanes.

Dr. ROCHE. I know.

Senator DOMENICI. We have a wonderful base where we also train the Germans.

Dr. ROCHE. I know.

Senator DOMENICI. And I am just wanting to lay before you that when you have got a good thing, do not change it.

When you have got a good thing, if there is more of it, go ahead and put it where it already is.

Dr. ROCHE. Senator, I can see that from my days working for Scoop Jackson, that your persuasiveness has remained as intense as ever, sir.

Senator DOMENICI. Yes, and they say I have gotten older, but that is probably right. I cannot avoid that, but I have learned a little bit along the way, too.

General, it is nice to see you, and we welcome you when you visit New Mexico, and look at our three air bases that are there, plus our laboratories, all of whom work in behalf of the defense of our Nation.

Thank you, Mr. Chairman.

Senator INOUYE. Thank you very much. Ordinarily, as we all know, these hearings would continue until about noon or thereafter but, because of the circumstances of this day, we have been requested to be present in the chamber for the reorganization. With that in mind, Mr. Secretary, congratulations on your first appearance, and we look forward to working with you, sir, and General, it is always good to see you here.

Senator STEVENS. Mr. Chairman—General Ryan, unless we call you up again, it is your last shot at us.

Senator INOUYE. Oh, really?

General RYAN. Yes, sir. My 4-year tour will be over 1 October.

Senator INOUYE. Do you want another hearing, because this was abbreviated.

General RYAN. Sir, you have made up for it in the past.

ADDITIONAL COMMITTEE QUESTIONS

Senator INOUYE. We will have another Ryan hearing. How is that?

General RYAN. Okay, sir. I will be glad to meet with you.

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

QUESTIONS SUBMITTED TO JAMES G. ROCHE

QUESTIONS SUBMITTED BY SENATOR DIANNE FEINSTEIN

NEW SECURITY ENVIRONMENT

Question. The past few years have seen a troubling proliferation of advanced aircraft defense systems as well as advanced combat aircraft around the world, including to many "states of concern."

What is your assessment of the ability of states of concern to deploy and use these systems to deny the Air Force access to certain regions or areas?

Answer. Advanced air defense systems and combat aircraft are highly sought after by many nations. High cost is the major reason why we have not witnessed a massive export of these systems. The ability for "states of concern" to use or employ advanced air defense systems is good. The automation and high reliability designed into these systems allows for relative ease of use. In contrast, concerning combat aircraft, "states of concern" are typically much slower in integrating the capabilities provided by modern fighter aircraft into their tactical operations. Technologically, there are or soon will be combat aircraft and associated weapons that are comparable or better than the F–16 and F–15, however, most of the "states of concern" do not provide the quality or quantity of pilot training required to take advantage of advanced capabilities in a freeflowing combat engagement.

Question. What is your assessment of what sort of anti-access capabilities they may posses ten years from now? Twenty years from now?

Answer. Ten years from now, anti-access capabilities will increase. Many nations place a high premium on improving their ground-based air defenses. In the future, advanced surface-to-air missiles (SAMs) will be more lethal due to increased mobility, better and redundant sensors, and the capability to conduct multiple target engagements. Ground based air defense radars will be more difficult to detect and jam and more capable of engaging low-observable targets. We expect to face SAM systems that will be capable of engaging conventional aircraft out to 200 nautical miles (NM). These factors will greatly enhance anti-access capabilities for an adversary equipment with the next generation of state-of-the-art SAMs.

Twenty years from now, anti-access capabilities will increase worldwide. The systems that became operational in the previous 10 years and follow-on SAMs will probably have found wide-spread export markets in areas of concern. Further, advances in radar development may challenge today's low-observable aircraft. In contrast, concerning combat aircraft, "states of concern" are typically much slower in integrating the capabilities provided by modern fighter aircraft into their tactical operations. Technologically, in the next 10 and 20 years, new advanced aircraft that will be equal to or superior to the F–16 and F–15 will become operational. These aircraft will be more technologically capable and lethal with extended ranges, multirole mission capability, enhanced air-launched weapons, and multiple target engagement capability. Advances in sensor technologies will enhance detection capabilities and provide the enemy with a "first-look" advantage over U.S. pilots. Advances in fire control will provide the enemy with a "first-shot" and launch and leave capability. Enemy first-look and first-shot capabilities will put U.S. pilots at a deadly disadvantage. Despite these technological advances, most of the "states of concern" do not provide the quality or quantity of pilot training required to take advantage of advanced capabilities in a free-flowing combat engagement.

Question. What sort of impact will this have on the Air Force's ability to maintain strategic and/or tactical superiority?

Answer. The development and proliferation of advanced defense systems and combat aircraft present challenges to the Air Force as well as joint and coalition operations. Highly decentralized, internetted defense systems coupled with advanced "double-digit" surface-to-air missiles (SAMs) such as the SA–10, SA–12, and SA–20 create a formidable wall to our current, non-stealthy aircraft. Penetration of such a barrier requires large force packages, multiple axes of attack, and continuous pressure to establish even localized air superiority. From an airman's perspective, this is a force-on-force symmetrical battle that costs lives, time, and money.

In addition, advanced combat aircraft around the world continue to prove worthy against the Air Force's aging combat fighter force, some exceeding 25 years of service. The Su–27, which became operational in 1986, is in some significant ways, a generation ahead of our F–15 air superiority fighters. Even more capability is realized in the Su–37, a modernized version of the Su–27. The French Rafale and Europe's Eurofighter will arguably prove to be a generation ahead of the Su–27. The F–22 will skip this generation of aircraft, maintaining a U.S. technological edge.

To maintain strategic and/or tactical superiority in the face of this proliferation, the Air Force must leverage the nation's technological asymmetric advantages of stealth, precision, stand-off, information and space. Constructs such as the Global Strike Task Force (GSTF), enabled by a robust modernization effort, will provide a new asymmetric capability to meet our toughest near-term challenges and future emerging threats.

The F–22's unparalleled combination of stealth, advanced avionics, supercruise and internal carriage of air-to-air and air-to-ground weapons, will reduce both ground/air threats, plus protect other assets, enabling air dominance. The F–22 will be able to gain entry to battlespace protected by double-digit SAM systems and for the first time, enable 24-hour stealth operations. With F–22s and B–2s, the GSTF will enable the joint team's capability to overcome enemy attempts to deny access. The GSTF will strike targets such as double-digit SAMs, theater ballistic missiles, weapons of mass destruction (WMD) launch, production and storage sites, as well as shore missile batteries. B–2s in concert with standoff weapons, such as sea and air-launched cruise missiles, will deliver the first strikes against these high-value targets.

ASIA-PACIFIC REGION

Question. Secretary Rumsfeld has suggested the need for a new and integrated military posture in Asia.

What is your assessment of the Asian-Pacific strategic environment, threats, and current Air Force capabilities in the region?

Answer. [Classified].

Question. Looking ahead, what sort of Air Force force structure needs to be developed and deployed to meet these challenges?

Answer. The Asian-Pacific region presents significant challenges for the U.S. Air Force. The great distances in this region imply a force structure capable of sustaining long-term, long-range engagement from dispersed bases. Our desired future force structure must enable us to overcome anti-access threats such as integrated air defense systems, cruise missiles, theater ballistic missiles, and weapons of mass destruction. The Air Force will be spearheaded by long-range stealthy strike platforms escorted by stealthy multi-role fighter aircraft supported by a robust air refueling capability, high altitude stealthy unmanned aerial vehicles, robust mobility forces, and robust air and space based surveillance, communications and navigation capabilities. To increase lethality, reduce risk to our crews, and preserve combat capability, our "shooters" must be equipped with standoff and direct attack precision weapons.

To produce the National Command Authorities' desired effects we will require robust Intelligence, Surveillance and Reconnaissance (ISR) capabilities combined with a Command and Control infrastructure that provides near real time "decision quality" information to commanders. As technology allows, we expect ISR and strike capabilities will migrate from manned aircraft to unmanned platforms and space vehicles. The transition to space will provide a genuine "deep look" capability that will enhance all facets of ISR as well as providing new options for fighting at long distances. The Air Force will continue its aggressive program of building directed energy weapons to enhance aerospace control against missiles and other threats. As we develop the capability to process and use tremendous amounts of data, we need to protect our information infrastructure by engaging in aggressive and effective Information Operations (IO). Finally, the nation requires sufficient numbers of forces to establish a rotational base capable of sustaining regional engagement in Asia as well as elsewhere around the world over the long haul without "burning out" the force.

Question. Some analysts have suggested that operations in the Asia-Pacific region, if for no other reason than geographic space, dictate the need for longer range platforms for future force planning such as heavy bombers and "arsenal planes" that could be loaded with a large number of standoff smart weapons and high speed long range strike aircraft.

What is your assessment of this force planning issue?

Answer. In general, we agree with this assessment and we continue to pursue promising technologies for development of precision standoff munitions and the platforms that could employ these munitions. Part of this effort is determining the best mixtures of aerospace supremacy and strike platforms, along with the refueling assets that provide longer range to all refuellable aircraft as well as the combination of air and space based Command and Control (C^2), and the Intelligence, Surveillance, and Reconnaissance (ISR) necessary to efficiently impact the right targets with our precision munitions. It is important to recognize that smaller aircraft have

significant advantages in stealth over larger platforms, yet combined with air refueling can be used over ranges traditionally thought of as only achievable with bombers. In addition we are using our various wargame activities to study the effectiveness of various concepts of operations (CONOPs) that better exploit both old and new capabilities. One example of this is the Global Strike Task Force CONOPs—the Air Force component of the Joint anti-access Global Reconnaissance-Strike CONOPs.

The key to providing Theater Commanders-in-Chief (CINCs) and/or Joint Task Force (JTF) Commanders the greatest range of possible options is to leverage longer range platforms and "arsenal planes" within new CONOPs tailored to exploit them along with our forward presence/forward deploying forces and emerging stand-off capabilities.

Question. What current aircraft meet these requirements?

Answer. Our current fleet of heavy, long-range bombers (B–1s, B–2s, and B–52s) meets these requirements. Our bombers provide the capability to project combat airpower from the continental United States to anywhere in the world, as aptly demonstrated by B–2s flying strike missions from Whiteman AFB in Missouri during Operation ALLIED FORCE. If necessary, bombers are readily deployable to forward operating locations in theater. In the Asia-Pacific region, our bombers would most likely deploy to secure locations as far forward as prudent to eliminate long transit times.

As you know, our bombers are all capable of delivering a large and varied munitions payload as well. All three currently drop the Joint Direct Attack Munition (JDAM), used with great success by the B–2 in Serbia. Other current or planned bomber standoff weapons include the Conventional Air-Launched Cruise Missile (B–52 only), the Joint Standoff Weapon (JSOW), and the Joint Air-to-Surface Standoff Missile (JASSM). The Air Force is also developing the 500-lb JDAM and the Small Diameter Bomb (SDB). The capability to upload each bomber with hundred of SDBs and engage numerous targets per mission will go a long way towards realizing the vision of an "arsenal plane" in the very near future.

Question. What future aircraft is the Air Force planning on developing and deploying that will meet these needs?

Answer. As for the near future, the Air Force will initiate the concept of the Global Strike Task Force (GSTF). B–2s, escorted by F–22s and supported by tanker aircraft, will launch on short notice and fly anywhere to "kick down the door" of any potential adversary. After the first strikes, the GSTF will land at forward operating locations and commence sustained operations. Joint Strike Fighters and upgraded legacy systems will join the fray until the conflict is successfully resolved.

For the distant future, the Department of Defense (DOD) and Air Force constantly review National Military Strategy and update aircraft requirements accordingly. Air Combat Command is using the Future Strike Aircraft Study to determine what the next generation attack "aircraft" will be—options are not limited to manned air-breathing bombers. Solutions may include hypersonic trans-atmospheric vehicles, unmanned combat aircraft or the "arsenal plane" you mentioned. However, the current bomber fleet will fill our long-range strike needs until 2037. This requires investment in research and development for a suitable replacement to continue for the next 10 or 15 years before we settle on a definitive design.

Question. What is your assessment?

Answer. Guam is an excellent support base and contributes significantly to our operational capability in the Asia-Pacific region, but we should not view it as a "silver bullet," quick fix solution to our basing challenges in the region. Creating a hub would locate critical capabilities on a single island, could create a single point of failure and also a large, hard-to-ignore target for missile-capable adversaries. We would, therefore, have to make a considerable number of force protection investments in order to defend this hub.

Additionally, a site's distance from the Asian landmass remains an inescapable and fundamental criterion for determining its usefulness for U.S. forces. Given this criterion, Japan and Korea remain much better situated for our needs, and are therefore key to our military posture in Asia. Only if our position is sharply reduced in these two nations do we see the value of establishing Guam as a hub for our operations in the region.

Finally, we need to strengthen the "ties that bind" in Asia, and we need Congress' support to ensure that forward basing remains politically viable in Asia.

Question. What are the Air Force's current forward deployment basing requirements in the region?

Answer. The Air Force currently relies on numerous key air bases in the region. We rely on these bases to provide a capability to carry out peacetime engagement operations as well as respond to a crisis in the region. Forward basing is and will

remain the corner stone of the regional Commanders-in-Chief (CINC's) ability to rapidly respond to any threat to U.S. interests or those of our allies and friends. We are in the process of supporting the Secretary of Defense in his review of national military strategy and will incorporate those findings into our Quadrennial Defense Review which will be sent to Congress later this year.

Question. What are your projections for future needs?

Answer. To deal with potential contingencies in the Pacific Rim, we need to augment our current facilities and complement them with "satellite bases" that could provide transient, base-of-the-day capabilities for limited, quick-turn strike operations, or that hold prepositioned war reserve materiel for future contingencies. To accomplish these goals, the United States Air Force might have to tap into up to 350 staging areas already available throughout the Asia-Pacific basin. In many cases, these areas are inactive airbases that, with congressional support, can be brought back to contingency/operational-level status. Lastly, in addition to new investments in added infrastructure, we expect our force protection requirements to go up considerably, especially since we expect to confront asymmetric anti-access strategies when we attempt to project military power in the area.

Question. How does Guam fit with these needs?

Answer. As the western-most U.S. territory in the Asia-Pacific region, Guam provides both the guaranteed access and infrastructure facilities we need to stage military operations in the area. So, although Guam may not warrant "hub" status except under appropriate circumstances, as explained in Question #6, we could certainly augment its capabilities.

The Apra Harbor, is frequently used by the Navy and can handle ships as large as aircraft carriers. Andersen Air Force Base, in turn, is a significant forward operating location. The base is ideal for forward basing bombers, fighters and/or transport aircraft. Finally, Air Force and Navy weapons storage facilities are present on the island and offer significant holding capacity.

Impressive as these capabilities are, improvements are certainly possible. Congressional support to upgrade underground infrastructure, such as sewage, water, and power distribution capabilities, would certainly augment Guam's ability to support contingency operations in this part of the world.

TACTICAL AIRCRAFT

Question. What are the Air Force requirements for the new generation of tactical aircraft given the new security environment?

Answer. Air Force requirements for next generation fighter aircraft are primarily driven by the threat environment.

The future threat environment drives the design and capability of the F–22 and Joint Strike Fighter (JSF). In addition to all the current threats around the world, there will be an expansion of "advanced technology" surface-to-air and air-to-air threats. The proliferation of these advanced systems will make the future battlespace far more dangerous.

Aerospace supremacy is the foundation of any joint, allied, or coalition operation. To achieve this supremacy in the face of future threat systems requires advanced technologies not available on today's "legacy" platforms. Characteristics such as low observability, advanced sensors, and information superiority systems are essential in the new security environment due to threat intensity, mobility, and the tempo of warfare. The highly maneuverable and supercruise capable F–22 is optimized for the air-to-air fight, ensuring its dominance over any projected threat aircraft while still retaining substantial air-to-ground capabilities. With the JSF, joint and coalition forces will have an affordable stealthy penetrator capable of attacking any heavily defended enemy surface target. Employing next-generation multi-spectral sensors and advanced situational awareness technologies, the JSF will be cheap enough to procure in quantity. These two extremely lethal and highly survivable aircraft will rapidly reduce the threat, enabling joint forces freedom from attack and freedom to attack.

Question. The F–22, for example, was originally conceived during the Cold War, and designed, at least in part, to counter advanced aircraft to be deployed by the Soviet Union. What is the threat baseline used to determine what capabilities are needed for the next generation of tactical aircraft?

Answer. The worldwide proliferation of multiple surface-to-air missiles (SAMs) and air-to-air aircraft constitutes a significant challenge to air dominance. The F–22 must be able to survive in and dominate a wide range of threat environments, from the solitary shoulder-mounted man portable SAM to the sophisticated integrated air defense system of an advanced adversary.

The surface threat includes the SA–10, SA–20, HQ–9, as well as proliferated, legacy surface-to-air missiles such as the SA–2, SA–3, SA–4, SA–5, SA–6, and SA–8, Roland, and Crotale as well as their naval variants.

In the air-to-air environment, the F–22 will have to gain air supremacy in encounters with Su–35s, Su–37s, Typhoons, and Rafales, as well as other legacy Eastern and Western fighters.

A detailed and classified baseline of the threat environment may be found in the F–22 System Threat Assessment Report (STAR).

Question. How do the capabilities of the F–22 fit in with current and future threat assessments?

Answer. The capabilities of the F–22 will not only dominate current threats, but more importantly, restore our aerial advantage for at least the next 20 years. Surface threats we faced during the Gulf War and Allied Force are being replaced by increasingly lethal systems like the SA–10, SA–20 and HQ–9, have longer range, better resistance to electronic jamming, multiple target tracking capability, and are more mobile than their predecessors. Russia and China are exporting these systems to Third World nations, and National intelligence organizations predict that by 2005, the number of countries possessing advanced SAMs will increase eight-fold.

Our current air superiority fighter, the F–15C, has lost most of its advantages over current threat aircraft. At best it is at parity, and in many cases at a disadvantage, to these threats. The F–15C will be at a disadvantage to all follow-on fighters. American air superiority can no longer be taken for granted.

The F–22 regains and will maintain our advantage over the next generation of surface and air threats. It combines stealth technology, supercruise, and advanced avionics in a highly maneuverable, lethal, and survivable aircraft. The F–22 is an integral component of ensuring American air dominance, the foundation of all our current and future military endeavors.

Question. The F–22 is intended to become the Air Force new air superiority fighter, with some air to surface capabilities as well.

How does it stack up against current tactical aircraft fielded by other nations?

Answer. The F–22 is far superior to all currently fielded fighters. First, there is no fielded, low observable adversarial aircraft. Other fighters will be unable to detect or track the F–22 until it is within visual range. Second, no other fighters can supercruise. The combination of supercruise and high altitude allows the F–22 to cover much more of the battlespace and significantly increases its missile range over slower and lower aircraft. Additionally, the F–22's advanced, integrated avionics give it greater situational awareness and informational dominance over all other fighters. The adage, knowledge is power, holds true in aerial warfare.

Finally, all of these advanced characteristics are woven into a highly maneuverable airframe. These lend the elements of surprise, survivability and lethality to the F–22. While any current fighter would be greatly improved by having just one of these characteristics, the F–22 combines them all into a truly dominant fighter aircraft.

Question. What sort of tactical aircraft capabilities do we expect other nations to develop or deploy in the next decade (two decades) which the F–22 will face?

Answer. The threat environment for the F–22 will vary considerably. Many countries will produce or import new or upgraded aircraft, missiles, and other weapon systems. This availability means that the United States could face extremely capable weapon systems in a regional conflict.

In the next two decades, many air forces will be smaller, cutting inventories of combat aircraft by 20 to 30 percent. The savings will enable air forces to buy small numbers of sophisticated combat aircraft. By 2010, countries like Iraq and Iran will have fewer aircraft, but with a higher percentage of fourth-generation (F–15 or F–16 class) fighters. Advances in avionics will also increase older aircraft's lethality and ability to penetrate defenses. For example, Romania upgraded 1960s era MiG-21 fighters with multi-mode pulse Doppler radars and improved cockpit situation displays, significantly increasing the aircraft's effectiveness.

Foreign tactical aircraft will focus on improved electronically scanned phased array radars capable of multi-targeting, reduction in infrared and radar detection, and integration of onboard sensors. Aircraft like the Su–27 FLANKER, which are in the inventory of approximately 10 air forces have had design improvements integrating new technology to improve lethality. The design improvements have manifested themselves in the Chinese Su–30MKK or the Indian Su–30MKI. These FLANKER derivatives have much better range and maneuverability and have even more advanced air-to-air munitions. Russia is expected to build FLANKER variants that integrate new technologies to suit customer needs. While the Russian Air Force may not be modernizing at their own desired pace, they continue to field significant

fighter technologies, some examples of which include: electronic warfare, within visual range infra-red missiles, and thrust vectored engines.

France is producing upgraded variants of its older Mirage 2000 fighter and developing the Rafale. Upgrades to the Mirage 2000 include an improved cockpit display, newer radar, and integration of more advanced air-to-air missiles, laser-guided bombs, air-to-surface missiles, and a long-range air-to-ground capability. The Rafale will have a smaller radar cross section than current fighter aircraft along with a very capable multimode, and a pulse-Doppler electronically scanned radar. The Rafale is expected to reach initial operating capability in 2002 for the naval version and 2005 for air force version.

The Eurofighter's digital quadruplex flight control system allows the aircraft to perform in either an air-to-air or air-to-ground role through on-board programming and system reconfiguration. It carries an all-aspect, multimode pulse-Doppler radar, an infrared search and track set, data link system, and, depending on the member nation, an extensive electronic warfare suite.

China's "next generation" F–10 fighter will be comparable to the F–16C Block 30 aircraft and is expected to reach IOC after 2005. China is also working on an "advanced" air superiority fighter that incorporates signature reduction techniques.

Advanced air-to-air missiles integrated with emerging fighters and the proliferation of precision munitions will increase the defensive and strike capabilities of air forces globally. Finally, even inferior aircraft armed with superior missiles may be able to defeat current U.S. aircraft and missiles, posing an even deadlier threat to high value assets such as Airborne Warning and Control System (AWACS) and Joint Surveillance Target Attack Radar System (JSTARS).

Question. How does it stack up against these projected competitors?

Answer. The F–22 will be far superior to all projected fighters. First, while several fighter aircraft are being designed to have elements of low observability, none comes anywhere near matching the F–22's "stealth." Other fighters will be unable to detect or track the F–22 until it is within visual range. Second, no other fighters will be capable of maintaining supercruise. The combination of supercruise and high altitude allows the F–22 to cover much more of the battlespace and significantly increases its missile range over slower and lower aircraft. Additionally, the F–22's advanced, integrated avionics give it greater situational awareness and informational dominance over all other fighters. The adage, knowledge is power, holds true in aerial warfare. Finally, all of these advanced characteristics are woven into a highly maneuverable airframe. These attributes yield the elements of surprise, survivability and lethality to the F–22—"First Look, First Shot, First Kill!" While any fighter, current or projected, would be greatly improved by having just one of these characteristics, the F–22 combines them all into a truly dominant fighter aircraft.

Question. According to a recent GAO report, the F–22 is slipping further behind schedule, with deliveries of test aircraft delayed and only 500 hours of flight testing completed. The report, entitled "F–22 Aircraft: Development Cost Achievable if Major Problems are Avoided," is the most recent in a series of GAO studies of the program. It states "that while the Air Force has experienced delays in the delivery of test aircraft and the completion of flight and ground testing, it has not extended the . . . completion date of the development program and therefore may not be able to complete development flight tests before the development program is scheduled to end." That end date remains August, 2003. What is your assessment of the GAO report and the criticisms it has raised about the F–22 program?

Answer. Flight test to date has exceeded 1,200 hours with exceptional results matching or exceeding predictions. However, late deliveries of test aircraft did delay our ability to generate flight test sorties. In preparation for the Low Rate Initial Production (LRIP) Defense Acquisition Board (DAB), we are reviewing the flight test program and believe some additional test time will be required prior to the start of Dedicated Initial Operational Test and Evaluation (DIOT&E). We will complete all necessary testing prior to the start of DIOT&E to ensure that we can safely and effectively enter operational test.

Question. Some critics of the F–22 program argue that the Air Force can maintain air superiority with upgrades to the F–15 and F–16, and that at $62 billion for a 341 plane program the money for the F–22 would be better spent developing the "generation after the next generation" weapons systems. How do you respond to this criticism? What capabilities does the F–22 get you that upgraded F–15 and F–16s can't provide?

Answer. The F–22 is the planned air superiority replacement for the F–15C. The need for the F–22 is driven by the air superiority force structure required to realize Joint Vision 2020 and the predicted total threat picture. The F–22 is the force enabler for Joint Vision 2020. The F–22's unique attributes of next generation stealth, supercruise, maneuverability, and integrated avionics will guarantee rapid air domi-

nance, ensuring protection of strike aircraft, naval surface units, and ground forces from air attack while continuing the advantage U.S. forces have held since 1953. In addition, the F–22 will permit, for the first time, 24-hour stealth operations and enable around-the-clock employment of our F–117, B–2, and JSF fleets.

The development and proliferation of advanced SAMs, such as the SA–10/12, will provide enemies sanctuary because existing fighters such as the F–15 are unable to operate in this environment with acceptable risk without protracted, asset intensive, defense suppression efforts. Twenty-five countries are forecast to possess advanced SAM systems by 2005. In addition, the F–15 is at rough parity today with current fighters such as the Su–27 and MiG-29. The F–15 will soon be at a disadvantage with the fielding of the advanced fighters such as the Su–35, Typhoon, and export versions of the Rafale and the proliferation of advanced air-to-air missiles such as the AA–11, AA–X–12, and MICA. Even with upgrades, the F–15 cannot deliver stealth, supercruise, affordable integrated avionics or the air dominance U.S. forces will require to survive against emerging threats.

Question. What is the current thinking in the Air Force about the development and deployment of the Joint Strike Fighter?

Answer. The successful development and deployment of the Joint Strike Fighter (JSF) remains critical to the Air Force's recapitalization of its aging fighter force. Serious fighter inventory shortfalls will exist after 2010—even if JSF is brought in on time—so timely completion of JSF's development and deployment is vitally important to the United States Air Force (USAF).

Our legacy fighters have served us well, but their military value is in decline. The F–16s and A–10s that the JSF will replace were designed and first fielded almost 30 years ago. Today, their warfighting effectiveness is being threatened by the proliferation of advanced air defense systems: fighters, air-to-air weapons, and surface-to-air missiles. To counter this continuing improvement in the worldwide threat, the Air Force must maintain an edge. In the air-to-air arena, that edge is the F–22. In the air-to-ground arena, it's JSF. The Joint Team has cooperated exceptionally well in achieving a JSF design that meets or exceeds all of our requirements at an affordable cost. For the Air Force, that means we'll get the JSF we need—a Day One fighter that can attack every enemy target, including advanced threat systems, at a price the nation can afford.

The Air Force position is that JSF is the only realistic option for meeting our need for an effective, affordable replacement for the F–16 and A–10. We have stretched the lifetimes of most of our legacy fighters to the maximum possible, making replacement necessary without delay. Replacing legacy fighters with new legacy aircraft does not meet our warfighting needs and saves no money. Restarting research and development on a new fighter program wastes the investment the nation has already made and the tremendous progress achieved. The coinciding delay will result in large force structure gaps as current aircraft reach the end of their service lives. If the Air Force mission remains to fight and win the nation's wars, we must have JSF.

STRATEGIC BOMBERS

Question. All three U.S. strategic bombers—the B–52, B–1, and B–2—were used in NATO's Operation Allied Force.

What are the lessons learned about the capabilities and complementarity of the bombers from Allied Force?

Answer. The bomber force was an integral part of Operation ALLIED FORCE. B–52s fired opening salvoes with long-range Conventional Air-Launched Cruise Missiles—a key enabler in any conflict. B–2s used stealth and GPS-aided precision weapons to strike high-value, heavily defended targets—denying enemy sanctuary. B–1s used speed and the largest payload of any United States aircraft to integrate with United States and North Atlantic Treaty Organization (NATO) forces—daily hammering of Serbian targets.

Each of our bombers has unique and, as you state, complementary capabilities. While all of our bombers share the common characteristics of large payload, long range, long endurance, and precision strike, each also has some mutually exclusive capabilities. The Air Force considers each of the bombers as part of an overall warfighting scheme. A B–2 is not interchangeable with a B–1 or a B–52. The Air Force will continue to upgrade our bomber fleet to highlight their complementary capabilities and effectiveness over the next four decades.

Question. How are these lessons being applied to future mission planning and force structure?

Answer. Bomber mission planning is designed to maximize weapons effects and minimize threats to the aircraft. As the bomber fleet is upgraded with more modern

weapons—to include the Joint Standoff Weapon (JSOW), the Joint Air-to-Surface Standoff Missile (JASSM), the Wind Corrected Munition Dispenser (WCMD), and the EGBU–28 Deep Penetrator—mission planning and bomber employment will continue to evolve. The Air Force concept of bomber operations will always exploit the aircraft/weapon combination that is most efficient and effective in achieving our combat objectives.

Force structure is dependent on National Military Strategy and individual weapon system capabilities. We are constantly assessing force structure needs and replacement timelines for follow-on strike aircraft.

Question. Did the Air Force's experience in Allied Force reveal any shortcomings or gaps in the capabilities of our strategic bomber forces?

Answer. The Air War Over Serbia (AWOS) did two things. First, it validated our bomber concept of operations and, second, it reiterated the need to continue aggressive modernization of the bomber fleet. The superior performance of bombers in AWOS confirms the value of our bomber force—each bomber filled its warfighting niche as advertised. However, the Air Force is also very aware that current capabilities are soon overcome by constantly emerging threats. All three bombers are structurally sound and will not reach the end of their service lives for another forty years. But, without modernization, the bomber force will become more vulnerable and less effective. Upgrades are designed to increase survivability, lethality, and situational awareness. The number one lesson "re-learned" in AWOS was the need for bombers to have long-range (beyond line-of-sight) secure communications and datalink.

Question. Although the emphasis has shifted from nuclear to conventional missions since the end of the Cold War, some long range bombers maintain nuclear war-fighting capabilities. Although still on-going, what is your expectation of how the Administration's review of U.S. nuclear posture will impact on the nuclear and conventional missions and the strategic bomber force structure?

Answer. As you know, Secretary Rumsfeld is conducting a broad review of defense strategy and force structure with an eye toward transformation. Simultaneously, the Department of Defense (DOD) is also conducting the congressionally-mandated Quadrennial Defense Review (QDR) and Nuclear Posture Review (NPR). Since these reviews are ongoing, we cannot estimate the impact of their findings. However, the Air Force believes there is a possibility of taking unilateral steps to tailor U.S. nuclear forces to meet the current threat environment. Nuclear strategy and guidance must preserve the essential elements that have made deterrence work over the past several decades. All force structure considerations should reflect the needs of the warfighter to meet national military objectives. Any strategic reductions must not result in a loss of conventional bomber capability. The current inventory of nuclear-capable bombers consists of 94 B–52Hs and 21 B–2s. Congress mandates 18 excess B–52H attrition-reserve aircraft each year in the Defense Authorization Act. The Air Force's desired end-state to meet operational requirements is 76 B–52Hs and 21 B–2s.

Question. With the closing of U.S. bases overseas—there were some 25 U.S. bases with 850 aircraft in Europe in 1990, for example, and only 6 bases with 174 aircraft in 1999—some analysts have suggested that the United States needs to place greater emphasis on long range bombers, with their large payloads, long range, and quick response time, for power projection. What is your assessment? Do our current forces provide sufficient capabilities for power projection missions or are additional long range bomber forces necessary?

Answer. Over the past 10 years, the Department of Defense and independent research organizations have completed several long-range airpower studies. These studies have reached a common conclusion—the most cost-effective way to provide long-range combat capability is to modernize the current bomber force, not procure a new, long-range aircraft. Modernization includes: integrating precision and standoff weapons, including the Small Diameter Bomb; improving situational awareness and connectivity, and enhancing survivability. Modernizing the existing bomber force also gives the Air Force the time needed to push and acquire the technology needed for the next generation long-range airpower capability.

INTELLIGENCE, SURVEILLANCE, AND RECONNAISSANCE (ISR)

Question. What is your assessment of the mix of existing and planned manned and unmanned Intelligence, Surveillance, and Reconnaissance (ISR) aircraft that can most efficiently satisfy requirements for timely and accurate information?

Answer. In the low altitude regime, Predator Unmanned Aerial Vehicle (UAV) is a highly desired commodity by theater Commanders-in-Chief (CINCs) for low-alti-

tude surveillance. Theater requirements for this system are growing as CINCs become more familiar with its capabilities so it is difficult to assess the proper mix.

For high altitude, the U–2 provides high-quality, multi-INT ISR and Global Hawk UAV provides long duration, IMINT ISR with a follow on SIGINT model planned. Global Hawk will complement overall ISR coverage and help fill currently unmet CINC requirements.

The RC–135 fleet provides timely, robust, and highly capable intelligence collection. Currently, there are insufficient aircraft to meet collection requirements with no funding programmed to increase the fleet and no UAV alternative to mitigate the collection shortfall.

Overall, current ISR capabilities are insufficient to fulfill worldwide theater requirements. However, the programmed ISR mix has been planned to optimize existing as well as new capabilities to maximize worldwide ISR collection efforts.

Question. Do these requirements shift from peacetime to wartime?

Answer. The Predator Unmanned Aerial Vehicle (UAV) system is in its infancy. Theater Commanders-in-Chief (CINCs) are employing this system in new and unique roles that will continue to evolve as CINCs become more familiar with its capabilities. It is likely that wartime requirements could exceed the 10 combat systems programmed for procurement.

During wartime, the U–2 pilot shortage issue would be resolved by closing the Flying Training Unit (FTU) and utilizing instructor pilots to fly operational missions (this was done during DESERT STORM). Additionally, during wartime, primary U–2 limitations shift from pilots to a number of sensors. Unlike other platforms, the U–2 has a modular payload capability that allows sensors to be interchanged (usually within 24 hours) to support unique mission requirements. However, the U–2 lacks enough sensors to provide full coverage in a 2 Major Theater War (MTW) scenario. Global Hawk is currently programmed to fill the shortfall by the end of fiscal year 2005.

As with peacetime, Tasking, Processing, Exploitation, and Dissemination (TPED) manning and infrastructure to properly exploit the volume of intelligence in a 2 MTW scenario remains a problem programmatically.

Similar to the U–2, during wartime, RC–135 FTU training ceases and programmed depot maintenance inputs are managed to provide maximum capability (also done during DESERT STORM). Currently, there are insufficient RC–135s to meet wartime collection requirements under the 2 MTW scenario.

Question. How does the Air Force work to integrate aerial ISR with information and analysis gained by other U.S. intelligence assets?

Answer. The Air Force Distributed Common Ground System (AF DCGS) is the primary weapon system utilized to integrate aerial ISR with information and analysis gained by other U.S. intelligence assets. It provides multi-intelligence Tasking, Processing, Exploitation and Dissemination (TPED) capabilities for the Joint Task Force and below. National, theater and tactical collection sources are, or soon will be supported by AF DCGS. In order to effectively manage ISR assets, the AF will field ISR management tools at core AF DCGS sites and Air Operations Centers (AOC). These ISR management tools will provide automated capabilities to synchronize the operational employment of ISR assets, fuse intelligence/sensor data and to perform Command and Control (C^2) of ISR.

Question. Some analysts have stressed the need to build additional ISR capabilities given the importance of precise information if precision guided munitions (PGMs) are to be effective.

What is your assessment of the role that PGMs have played in recent Air Force activities and in future Air Force war-fighting plans?

Answer. Since their introduction in Vietnam, PGMs have increasingly become the weapons of choice for the Air Force. In Vietnam, multiple sorties and a great deal of munitions had to be expended to ensure the destruction of high-value targets due to a severely limited PGM capability. During Operation Desert Storm, and increasingly so in Operation Allied Force, the Air Force was able to approach a one target/one weapon goal through use of PGMs. Increased emphasis on limiting civilian casualties and reducing collateral damage, as well as reducing the risk for American aircrews, have made PGMs the preferred weapons for the air campaign. In short, PGMs allow a conflict to be won in less time, with fewer sorties, and with fewer casualties. All air-to-ground weapons currently being developed are guided munitions. The clear thrust of development is toward improving accuracy across the board. While unguided munitions are and will continue to be in inventory, it is clear that the importance of precision munitions will continue to grow.

Question. What is your assessment of the nexus between ISR capabilities and effective use of PGMs?

Answer. One of the most critical aspects of the ISR/PGM nexus is the ratio between the inventory of available ISR systems and the number of PGMs being employed. Since PGMs have stringent requirements for accurate intelligence products, the link between the ISR and weapons communities is a strong one. The more PGMs we employ, the greater the demand for high fidelity, accurate ISR. Lessons from recent campaigns have highlighted the need to compress those timelines wherever possible. Once the campaign has moved to the operational phase, the battlefield picture is constantly in a state of flux requiring dynamic reassessment of certain ISR information in order to plan for proper employment of PGMs. Current ISR systems are strained to provide adequate planning information for even a small-scale contingency action like the Air War Over Serbia. It is critical that more ISR systems be procured, fielded, and manned with properly trained personnel in order to meet a major regional conflict requirement. The increasing use of PGMs and other guided weapons will place an even greater burden on our ISR capabilities.

Question. What additional capabilities does the Air Force need to develop to be able to fully leverage PGMs?

Answer. Effective employment of PGMs requires that accurate information about potential targets be made available to the warfighter in a timely manner. Ideally, the Air Force needs to develop Intelligence, Surveillance, and Reconnaissance (ISR) capabilities for real-time transmittal of pertinent information to the weapon platform and/or weapon in flight. This will permit the immediate targeting/retargeting of PGMs based upon the latest battlefield picture, and result in the most efficient use of PGMs. To achieve this, current PGM weapons need to be upgraded, and future PGMs need to be designed to allow the weapon to receive and react to real-time information transmittal. In addition, ISR systems must be upgraded/designed to permit this interface with weapon platforms and PGMs.

One of the most critical aspects of an ISR/PGM upgrade is the ratio between ISR systems and the number of PGMs being employed. An increased number of ISR systems must be procured, fielded, and manned with properly trained personnel in order to meet a major regional conflict requirement. The Small Diameter Bomb, Joint Direct Attack Munitions, and other guided weapons, which significantly increase the number of targets that can be engaged with PGMs, will place an even greater burden on our ISR capabilities. Without significant upgrades, our ISR infrastructure will not be able to support the growing need for timely and accurate targeting.

Question. Given recent events with manned U.S. military surveillance aircraft, there is a growing interest in replacing manned aircraft, where possible, with unmanned vehicles such as the Global Hawk platform.

What is your current thinking on how to best introduce the Global Hawk platform? At what pace?

Answer. The Global Hawk demonstrated military utility during the Advanced Concept Technology Demonstration that finished last year, and we intend to field an initial version, with minor improvements, starting in 2003. These improvements incorporate operational requirements not addressed in the previous demonstration phase, such as provisions for emerging air traffic management standards. The initial version will address unmet intelligence needs, augment existing surveillance aircraft, and reduce the burden on low density, high demand systems such as the U–2. Fielding the Global Hawk in the near term will also help develop a greater understanding of the unique challenges and broad operational potential of long-endurance unmanned aerial vehicles.

While the initial version will satisfy some operational requirements, there is a need for greater sensor performance. We have begun development of this improved capability and will draw upon sensors developed under other programs, such as the Multi-Platform Radar Technology Insertion Program to meet the full requirement by 2009.

Our current plans include production of two Global Hawk aircraft per year from 2002 to 2008 and four per year thereafter.

The fiscal year 2002 budget request initiates an accelerated program approach that will provide full capability for most sensors by 2005 and increase production to four in 2003 and six per year thereafter. The accelerated approach fields more capability sooner and further accelerates the transforming influence of unmanned systems on military aviation.

Question. What is your thinking on how to phase-in the Global Hawk with current U–2 operations?

Answer. The U–2 is a highly capable system that is filling real-world needs today. It has played a key role in every major U.S. military operation in recent history. It is, however, a low-density, high-demand asset that has been operating at a tempo that can reduce the effectiveness of people and equipment. We have to manage col-

lection requirements carefully. Some requests go unmet, while the need for information continues to grow rapidly. The Global Hawk will help meet these needs and reduce the U–2 operations tempo to a more manageable level. Global Hawk will build on the experience base of the U–2. In fact, the Global Hawk will feed the same intelligence analysis systems as the U–2 systems that will also evolve to address growing information needs. We plan to base the Global Hawk alongside the U–2 at Beale Air Force Base in California to capitalize on the benefits of shared experience and infrastructure. Over the longer term, Global Hawk is expected to replace the U–2 as we experience losses through attrition.

Question. What additional capabilities does Global Hawk bring to the table?

Answer. The main advantage that Global Hawk brings is the ability to operate for long periods of time. This allows a single Global Hawk to provide a more sustained presence than other airborne systems, such as the U–2. But more importantly, it offers much greater range that can overcome the challenge of increasing limited access to forward basing needed to effectively address U.S. interests around the world. Global Hawk also brings additional collection capability. The initial configuration employs low-cost sensors that provide good capability. Over the longer term, we plan to install higher performance sensors that meet or exceed the capability of current systems such as the U–2.

Question. What are the implications of the cost of full development and deployment of Global Hawk on other Air Force operational capabilities?

Answer. The Air Force follows a budgeting process that balances program priorities to deliver and maintain required operational capabilities at the lowest possible cost. Each program is addressed on its own merit and funding changes in different programs are not linked to one another. Global Hawk will augment other operational capabilities such as the U–2. It will address operational needs that currently go unmet and relieve the stress on low-density/high-demand systems. Over the long term, Global Hawk will be capable of replacing the U–2. However, the U–2 continues to provide important operational capabilities and the Global Hawk will not assume U–2 missions until it has proven capable of satisfying mission requirements.

LESSONS OF OPERATION ALLIED FORCE (KOSOVO)

Question. Although there was much to commend about air operations in Operation Allied Force, a recent GAO Report concluded that "the kind of ad hoc basing of combat forces that occurred during Operation Allied Force demonstrates that the lack of at least some planning has the potential to result in unnecessary problems and inefficiencies."

How would you characterize the basing, logistics, and coordination problems identified by the GAO?

Answer. Per 22 June 2001 memorandum for JCS/J7, Air Force concurs, with two substantive comments, with the GAO report "Kosovo Air Operations: Combat Aircraft Basing Plans are Needed In Advance of Future Conflict."

The two substantive USAF comments are repeated here:

"USAF–1 SUBSTANTIVE: GAO comment #5 (responding to JCS comment #3, 10 May 2001): 'As noted in our draft report, because Operation Allied Force did not fit into the definition of conflicts for which NATO had prepared combat plans, NATO's structure did not apply to Operation Allied Force, and the United States prepared plans for its own participation in the operation after the conflict arose.' GAO comment reflects incomplete research. GAO failed to fully consider that a NATO operation was being evaluated, not a U.S. operation. GAO consultations with NATO, in addition to EUCOM, would have been appropriate. GAO wording implies that NATO and the United States started the operation without a plan. In fact, significant NATO and U.S. planning occurred prior to the start of Operation Allied Force (OAF). Initial planning was modified to reflect political constraints imposed by member states prior to the start of OAF. Once it became apparent that a 72-hour campaign would not achieve the desired result, NATO and U.S. planners made significant alterations to the operational plan.

"UDAF–2 SUBSTANTIVE: GAO comment #7 (responding to JCS comment #5, 10 May 2001): 'We expect that, as part of its effort to create a database of available airfields, EUCOM will make use of already available resources to minimize or eliminate any duplication of effort.' GAO comment reflects incomplete research. In addition to U.S. logistics planning aids (e.g., Automated Air Facility Information File), NATO has established the Reaction Forces (Air) Staff (RFAS) in Kalkar GE, whose mission is '. . . to support the Strategic Commanders and the Director Combined Joint Planning Staff with central air expertise and . . . is responsible for deployment related (emphasis added) aspects of strategic and operational air planning throughout the full range of NATO operations . . .' Again, consultations with

NATO officials would have provided a more complete picture of changes made in light of OAF."

Question. What steps have been taken by the Air Force to address these issues?

Answer. As the GAO report alludes to on page 12, the Air Force is in the process of standardizing and partially automating its contingency site survey processes and beddown feasibility analysis. To this end, the Air Force fielded and is in the midst of refining the Logistician's Contingency Assessment Tools (LOGCAT). LOGCAT provides an automated employment-driven planning capability that accurately and rapidly identifies resources at potential beddown locations, allows rapid capability and limiting factor identification at beddown locations, and allows units to rapidly tailor deployment packages based on assets identified at the deployment location. The LOGCAT system includes two subsystems, Survey Tool for Employment Planning (STEP) and Beddown Capability Assessment Tool (BCAT). STEP provides a system capability for collecting site survey information, and provides the capability to transfer and store site survey data in a central database known as the Employment Knowledge Base (EKB). BCAT is a robust decision support tool that analyzes aircraft beddown feasibility from the standpoint of aircraft sortie production, POL, munitions, billeting, messing, and aerial port operations. These systems will aid the deliberate planning for future conflicts, and provide the ability to quickly respond to expeditionary taskings with informed combat aircraft beddown decisions.

QUALITY OF LIFE ISSUES

Question. Concerns have been raised in recent years that, given the tempo of operations, the Air Force has faced difficulties in retaining sufficient skilled personnel, maintaining high morale, and so forth.

What is your assessment of the current personnel situation?

Answer. Our expeditionary mission and complex weapon systems require a seasoned force—we depend on retaining skilled people to maintain our readiness for rapid global deployment. Recently, TEMPO, a robust economy and military/public sector pay inequities have affected our ability to recruit and retain technologically adept, mid-career airmen, officers, and civilians. This is true for the Total Force—active duty, Air National Guard, Reserve, military and civilians. We've made progress recruiting the numbers of people with the skills needed, and we are actively pursuing initiatives that will eliminate barriers to attracting the right candidates for our jobs. However, retention of highly trained people remains challenging.

There is not one "silver bullet" that will turn the tide on retention; if we take care of people and their families, many of them will stay with us despite the "push" of increased TEMPO and "pull" from the private sector. To combat the "push" from within, we've implemented structural and cultural changes via the Expeditionary Aerospace Force concept to enhance responsive force packaging, as well as providing more stability and predictability in deployment station scheduling. We must continue to address the "pull" from the private sector by focusing on our core quality of life programs: upgrade neglected workplace environments, provide safe and affordable living accommodations, adequately compensate our people, enhance community and family programs, provide educational opportunities, provide affordable health care, and reduce out-of-pocket expenses for housing, travel and medical expenses. Quality of life initiatives are critical to our future. They affect the welfare of our men and women and are crucial factors to our overall readiness.

Question. What more needs to be done to assure that the Air Force has highly skilled and qualified personnel?

Answer. We know that there is not one "silver bullet" that will turn the tide on retention; our strategy is based on the premise that if we take care of people and their families, many of them will stay with us despite the "push" of increased TEMPO and "pull" from the private sector. We must continue to focus on our core quality of life programs to upgrade neglected workplace environments, provide safe and affordable living accommodations, adequately compensate our people, enhance community and family programs, provide educational opportunities, affordable health care, and reduce out-of-pocket expenses for housing, travel and medical expenses, as well as provide adequate manpower to balance resources and requirements.

We have implemented structural and cultural changes via the Expeditionary Aerospace Force (EAF) concept to enhance responsive force packaging and to provide more stability/predictability in deployment and home station scheduling.

For our civilian workforce, we are pursuing a multi-faceted approach to help retain our critical skills and attract the best and the brightest for the future. However, more needs to be done in the areas of accession planning, force development,

and retention/separation management. For fiscal year 2002, we increased funding for force-shaping by doubling our intern program, increasing civilian leadership training, and funding selective use of the Voluntary Separation Incentive Program (VSIP). For the future, near-term and long-term, we must continue to address civilian workforce shaping, particularly as it relates to attracting, developing, and retaining the high-tech skills we need for our aerospace mission.

We also need to focus on quality of life related issues for our civilian workforce, such as pursuing funding for civilian tuition assistance for college, allowing civilians excused absence for exercise activities during the normal duty day, and for programs such as the Employment Assistance Program.

Question. What are your top priorities in addressing quality of life issues?

Answer. The Air Force continually reviews quality of life to ensure our eight core priorities address current requirements. First, we must ensure adequate manpower as updated wartime planning factors and real-world operations validate increased manpower requirements. Second, we must improve our workplace environments, which have been neglected. Third, fair and competitive compensation and benefits are important to our people and are key to maintaining the all-volunteer force. Fourth, we must continue to address force-wide balanced TEMPO issues with manning, infrastructure and equipment, training, recruiting and retention, and mission requirement assessments. Fifth, quality health care is essential for our members and their families—full funding for Defense Health Program is needed. Sixth, our people want safe, affordable housing. Seventh, with more than 62 percent of our force being married, enhanced family and community programs are very important. Eighth, improved educational opportunities are a must for individual and professional development. A significant challenge is executing multiple improvements with our current resources—it is imperative we balance resources to meet requirements. Every dollar we invest in quality of life positively impacts our Total Force readiness.

TRANSFORMATION AND MODERNIZATION

Question. A joint Boeing and Air Force Research Lab study suggested that fighter aircraft production costs could be cut in half by aggressively incorporating commercially proven technologies and processes throughout military aircraft development and production.

What is your assessment of this study?

Answer. The joint Boeing/Air Force Research Laboratory 21st Century Affordable Aircraft Thrust study can be assessed in two parts. The first part identifies manufacturing and process technologies and Reduced Total Ownership Cost (R–TOC) advancements, which could accrue to the benefit of future aircraft developments and procurements. The second part of this study addresses procuring new F–15C-equivalent aircraft to replace the Air National Guard's current F–15 aircraft.

The first part of the study came to the conclusion that new design techniques and manufacturing procedures and processes could reduce the R–TOC (life cycle cost) of future aerospace vehicles. New manufacturing processes such as Virtual Manufacturing have the potential to reduce cost by employing three-dimensional, computer-aided design and manufacturing techniques to practically eliminate rework in structural assemblies. Also, open system architectures for aerospace vehicle avionics could reduce operations and support costs, as well as greatly reduce integration time, facilitate avionics upgrades, and maintain a competitive environment. If successful, we believe these efforts could make a significant contribution in achieving lower total ownership cost.

The second part of the study focused on developing cost estimates for replacing Air National Guard F–15 aircraft with a new less expensive model. As the Air Force Chief of Staff stated last year in a letter to Congress, we do not have a requirement for additional F–15s. Our current F–15 force structure is sufficient to sustain the fleet through its projected service life. The F–22, along with the Joint Strike Fighter, is the correct "sight picture" for our future.

Question. What actions, if any, have been taken or are planned to incorporate its findings and recommendations in Air Force development and production?

Answer. The Air Force is pursuing some of the recommendations identified in the joint Boeing/Air Force Research Laboratory 21st Century Affordable Aircraft Thrust study in the development and production of future aerospace vehicles. The Air Force is relying on Reduced Total Ownership Cost initiatives to achieve aerospace vehicle affordability goals. For example, the joint Air Force/Defense Advanced Research Projects Agency Unmanned Combat Air Vehicle advanced technology demonstration is demonstrating affordable manufacturing and assembly techniques and processes to an 80 percent cost confidence level. The successful demonstration of affordable

processes through these and future programs could validate the cost estimating relationships identified in the 21st Century Affordable Aircraft Thrust study.

QUESTIONS SUBMITTED BY SENATOR KAY BAILEY HUTCHISON

JOINT STRIKE FIGHTER

Question. I understand that both Joint Strike Fighter demonstrators are meeting or exceeding performance and cost targets. Can you explain the capability differences between the F–22 and JSF and is the 339 F–22 to 1,763 JSF mix the best cost versus capability trade-off possible?

Answer. Both the F–22 and JSF are exceptional aircraft and their differences are significant. These differences stem from the objectives used to design the aircraft at their inception. The F–22 was designed to be the next generation air superiority fighter which contrasts with the JSF objective to develop an affordable, multi-role strike aircraft capable of meeting the needs of the Air Force, Navy, Marine Corps as well as our allies. In short, they were designed for different missions. These objectives influenced the design decisions yielding different, yet complementary aircraft.

The F–22 and the JSF continue the "High/Low" combination currently fulfilled by the F–15 and the F–16. The F–22/JSF "High/Low" combination is the Air Force solution to countering emerging threats. The F–22, the "Force Enabler," is optimized for our toughest air-to-air missions. The F–22 will dominate future battlespace from day one, while protecting and enabling the remainder of the Joint Force. The JSF, the "Bulk of the Force," is optimized for multi-role air-to-ground precision attack of high value, heavily defended targets. The JSF's stealth, large internal payloads, and integrated multi-spectral avionics holds mobile and hard targets at risk. The JSF's low cost allows deployment of large numbers against future threats. The JSF/F–22 Force balances affordability and capability and is the most cost effective solution to meet emerging threats.

The F–22 is the planned air superiority replacement for the F–15C. The need for the F–22 is driven by the air superiority force structure required to realize Joint Vision 2020 and the predicted total threat picture. The F–22 is the "Force Enabler" for Joint Vision 2020. The F–22's unique attributes of next generation stealth, supercruise, maneuverability, and integrated avionics will guarantee rapid air dominance, ensuring protection of strike aircraft, naval surface units, and ground forces from air attack while continuing the advantage U.S. forces have held since 1953. In addition, the F–22 will permit, for the first time, 24-hour stealth operations and enable around-the-clock employment of our F–117, B–2, and JSF fleets.

The JSF will provide large numbers of capable aircraft necessary to destroy a wide range of targets required to stop a well-armed aggressor. The capabilities of the JSF were balanced by cost to bring about a "best value" design. The resulting design is one that can carry a staggering range of air-to-surface weapons and deliver them precisely. Some of these will be carried internally to maintain the aircraft's radar cross section. For example, the JSF will be able to attack mobile targets as well as those in close proximity to friendly forces in any weather condition. As the Air Force's replacement for the F–16 and the A–10, the JSF was designed to excel at the wide range of missions previously accomplished by those two aircraft.

Although the Air Force needs sufficient F–22's to support the directed National Military Strategy (10 Air Expeditionary Forces), the 1997 Quadrennial Defense Review (QDR) reduced the F–22 buy to 339. The initial JSF inventory requirement of 2,036 was based on replacing the F–16 and A–10 force structure approximately 1:1. Today, however, the JSF inventory objective is 1,763, a number which provides sufficient airframes to replace the F–16 and A–10 fleets with required capability (vs. numbers) for 2010 and beyond. The current relationship of 339 F–22s and 1,763 JSFs is based on certain assumptions; platform baseline cost estimates, projected warfighter capabilities, available funding, and the 1997 Quadrennial Defense Review (QDR). The current QDR is examining requirements for the new force structure (10 AEFs) and long term plans for the F–15E and F–117. The Air Force will continue to assess the complementary nature of the F–22 and JSF programs, as their cost and capabilities are better understood.

B–1

Question. Since the B–1 has been taken out of the nuclear deterrence mix, what are the Air Force's future plans with the bomber? Do you plan to transfer more to the Reserves or Air National Guard? Are there plans to consolidate B–1 basing?

Answer. The Air Force is in the middle of an aggressive modernization program to keep the B–1 effective and viable for the next forty years. Current upgrades are designed to increase lethality, survivability, and situational awareness.

The B–1 consolidation plan will reduce the B–1 fleet from 93 aircraft to 60 and the five main operating bases will be consolidated from five to two. The savings incurred from partial fleet retirement will be used to modernize the remaining B–1s. The intent is to have a leaner, more capable, more survivable B–1 force.

Two Air National Guard (ANG) bases (Robins Air Force Base, Georgia and McConnell Air Force Base, Kansas) and one active base (Mountain Home Air Force Base, Idaho) were selected as the best candidates for B–1 drawdown. Each of the three B–1 squadrons is small and each of the bases has other missions and other aircraft assigned. No bases will close, ANG personnel will be provided with other missions, and active personnel will be reassigned to fill other critical needs. The Air Force is working to mitigate impacts on the personnel and bases involved.

WEAPON SYSTEM

Question. During the CINC's testimony they voiced concern over the lack of preferred munitions for training and operations. Which weapon system purchases do you believe need to be increased? Would you assess to what degree a lack of these weapons affects your force's readiness?

Answer. This is not an issue of purchasing more of one weapon, or set of weapons. We have a significant shortfall in training and War Reserve Materials (WRM) requirements. Major new weapons acquisition programs are well funded, but budget constraints prevent the Air Force from purchasing the quantity required by our defense strategy. Additionally, funding shortfalls in legacy munitions/consumables such as GBU–10/12's, flares, cartridges, rockets and practice bombs are having an impact on readiness. Legacy munitions have been underfunded over the last decade, resulting in a $2 billion Future Years Defense Plan (FYDP) shortfall. Unfunded training requirements and the necessity to continue training at the expense of the WRM stockpile have created a $451 million bow wave as well as a $1.6 billion shortfall in testing/training munitions over the FYDP to replenish the WRM stockpiles used for training. The $186 million increase for training munitions contained in the fiscal year 2002 President's Budget will stop the undesirable use of War Reserve Munitions for warfighter training in fiscal year 2002. However, we will need sustained increases in training munitions in future years or we will once again have to use War Reserve Munitions for training. We need to fully support our current legacy weapons and consumables programs while continuing to fund future weapons.

Air Force readiness is affected in two ways by shortfalls in legacy munitions and consumables. First, current funding allows us to support one Major Theater War (MTW), but we are accepting some risk supporting a second. The second theater will be forced to rely primarily on unguided munitions to achieve CINC objectives. Second, the lack of preferred weapons in a theater will result in an increase in the duration of the conflict, with a corresponding increase in attrition and greater potential for collateral damage.

CLOSURE OF COMMISSARIES

Question. I received notice that the Commissary at Brooks AFB was being closed. I am puzzled by this decision as usage of this consistently profitable commissary has in fact increased recently, since the commissary at Kelly was closed.

Why would the Air Force sign-off on the closure of commissaries that are providing a service to active, reserve and military retirees and are not losing money?

Answer. At the outset it must be understood that there is no profit in the operation of commissaries. The challenge is to balance the quality of life needs with the business case in order to make decisions on commissary establishment and closures. In the case of the Brooks AFB Commissary, it was a pretty clear decision. The presence of full service commissaries at a reasonable distance from Brooks AFB provided enormous capacity to deliver the commissary benefit in a first class manner. The Brooks AFB store sales had reduced 44 percent since fiscal year 1995 and reduced 11.3 percent between October 2000 and May of this year. Additionally, the appropriated dollar costs to dollar of sales ratio at Brooks AFB Commissary was about triple to that of the surrounding San Antonio stores—and growing. It was estimated that we could save about $1 million per year by having the Brooks AFB people shop at other close by stores. The Brooks AFB store had become a grocery convenience store—and a very expensive one to operate.

Question. Was any assessment conducted to see if the other San Antonio commissaries could absorb the patrons, before the decision was made to close Brooks'?

Answer. Yes, the capacity of other San Antonio area commissaries was evaluated and considered in the business case developed by the Defense Commissary Agency (DeCA). As you know there are several large commissaries available in the Brooks AFB commuting area. They include Fort Sam Houston (10 miles), Lackland AFB (11 miles), and Randolph AFB (23 miles). Fort Sam Houston Commissary is a fairly new facility completed in 1994, Lackland AFB Commissary recently received a major upgrade which increased the sales floor by approximately 10,000 square feet, and Randolph AFB Commissary's sales area was expanded. These commissaries can more than adequately handle the patron base that the closing of Brooks AFB Commissary will generate. In addition, these larger stores offer many more features, more variety, and a larger product selection, all of which provide a greater opportunity to save.

Question. Could you discuss the effects of deferred Real Property Maintenance funding on Air Force readiness and quality of life?

Answer. The immediate impacts of deferred facility Operation and Maintenance (O&M) funding are reduced productivity on the flight line, in the maintenance shops and in the office administrative areas as a result of unreliable and degraded facilities and infrastructure. Quality of life not only implies dormitories and family housing, but also includes community support and the workplace. Lack of adequate funding leads to Band-Aid fixes and less than required day-to-day sustainment.

BRAC

Question. I am not sure that we have actually realized any cost savings from the last few rounds of BRAC due to environment clean-up and other turn over costs. It also worries me to see the Air Force close a training base only to discover that you cannot meet your training requirements. Does the Air Force require another round of BRAC? If so, will you maintain enough facility growth capacity for surges or if overseas units had to redeploy to the United States?

Answer. The Air Force needs additional rounds of Base Realignment and Closure (BRAC) to realign its force structure to meet current and projected requirements and properly size its infrastructure consistent with the force structure plan. The Air Force will work to evaluate and ensure that it has the right amount of infrastructure to accommodate potential contingency and redeployment situations.

GUARD AND RESERVE

Question. The Reserves and National Guard have greatly increased their active duty support and deployment schedules. Is the Air Force providing adequate support and funding to the Reserves and National Guard to maintain this pace?

Answer. You are correct; the rate at which the Air Force Reserve supports the active duty is at an all-time high. In fiscal year 2000, the average unit reservist performed 89.75 paid days, far beyond the one-weekend-a-month, two-weeks-a-year of the past. Our Reservists are currently performing mandays at a rate not seen since the peak of Operation Desert Storm in 1991.

Although we face certain challenges in the realm of funding, we feel that the Air Force provides adequate funding to support our increased contribution to the Total Force. The Air Force pays for manday support through Military Personnel Account (MPA) funding and also fully funds our flying hour program.

The Air National Guard (ANG) completed a review of full-time and traditional ANG manpower requirements to support the Air Expeditionary Force (AEF). The results of this effort validated a requirement of 2,048 additional full time manpower resources. Historically the ANG has had limited full time manpower to operate and maintain facilities, repair aircraft/equipment, and train the drilling force. Now with a formalized AEF construct and increasing support requirements, the ANG must be resourced properly for both training and increased Operations tempo. We have funded 1,151 of this requirement through internal offsets and funding received from the Air Force, leaving an unfunded requirement of 897 full-time positions in logistics, communications, air traffic control, combat communications, and airlift/air refueling aircrews.

V–22 PROGRAM

Question. I am concerned that a significant portion of the Department's rescissions were financed at the expense of your service's participation in the V–22 program ($240 Million of $505 Million). Does this signal a weakening of the Air Force's commitment to this leap-ahead technology or only the reprogramming recommended by the Blue ribbon panel?

Answer. The requested rescission of $240 million reflects a change in acquisition strategy and not a change in the Air Force's commitment to the V–22 program. The

CV–22 is still the best weapon system to modernize our Special Operations vertical lift forces and we still intend to field the aircraft. However, the V–22 Program needs to address known deficiencies, especially those highlighted by the Blue Ribbon Panel, before the Air Force begins full-scale production of the CV–22. In the interim, we are committed to continue the CV–22 flight test program, and will assist the Navy in correcting deficiencies in the common V–22 baseline and to prepare for CV–22 operational testing.

The Air Force remains fully committed to fielding the CV–22. The Air Force is working with our partners to reduce the program's risk and to get the warfighter the best aircraft possible.

Question. As you may know, on March 15th the Commerce Committee, of which I am a member, reported out S. 361, which prohibits an air carrier from using the services of a person as a pilot who is 65 years or older. Currently, a pilot cannot be 60 years or older.

What is the Air Force's opinion of this legislation?

Answer. We do not believe it would be appropriate to voice an opinion on this issue, and have no data on pilots flying at that age. In our view, the issue focuses on civil aviation medical and safety issues for which the Air Force is not in a position to expertly comment.

Question. How would raising the mandatory retirement age for pilots impact the Air Force's pilot shortage?

Answer. There is genuine uncertainty over the level of benefit to the Air Force. While raising the mandatory retirement age could be viewed as an incentive for pilots to remain in the military until retirement eligibility and would also increase the national inventory of civilian pilots (and thus reduce near-term airline hiring demand by some amount), these positive effects could be offset to some degree by the negative retention effect (on mid-career military pilots) created by higher potential "paper" career earnings generated by the additional five years spent as a senior airline pilot in the highest wage brackets.

BRAC ISSUE

Question. As you may know, the 1996 BRAC resulted in the closure of Kelly Air Force Base. At the end of that painful process, it became clear that many of the best facilities from Kelly Air Force Base had, in fact, been realigned to Lackland Air Force Base. This unusual division of property has made it more difficult for the community of San Antonio to adjust to the new circumstances. Would you please examine this situation and report back if any of the previously realigned facilities could now be declared surplus and conveyed to the community?

Answer. As recommended by the Base Relignment and Closure (BRAC) Commission, the airfield and all associated support activities and facilities at Kelly Air Force Base (AFB) were realigned by law to Lackland AFB. The Air Force has authority to dispose of the remaining 1,879 acres. However, many of the facilities located on the remaining acres are currently still needed by the Air Force. Congress recognized these types of situations could be harmful to long-range planning and development opportunities to the local communities affected by BRAC and granted Military Departments a property conveyance authority called a leaseback (Public Law 104–106). A leaseback allows the Department of Defense to transfer nonsurplus BRAC property by deed or through a lease in furtherance of conveyance to the Local Redevelopment Authority (LRA). The transfer requires the LRA lease the property back to the Federal Department or Agency for no rent. When the Federal Department or Agency no longer requires use of the facilities, the lease can be terminated. The Air Force and the LRA for Kelly AFB have agreed to enter into leasebacks for all the facilities currently used by the Air Force.

QUESTIONS SUBMITTED TO GENERAL MICHAEL E. RYAN

QUESTIONS SUBMITTED BY SENATOR DANIEL K. INOUYE

F–22

Question. Has a decision on the future of the F–22 been made, what options are you looking at, and when will a production decision be made?

Answer. The F–22 is ready for a Low Rate Initial Production (LRIP) decision pending completion of the Defense Strategic Review.

Question. Operational testing of the F–22 may be delayed up to nine months, and that the congressional cost cap on full scale development will likely be exceeded. Is this true?

Answer. Flight test to date has exceeded 1,200 hours with exceptional results matching or exceeding predictions. However, late deliveries of test aircraft did delay our ability to generate flight test sorties. In preparation for the Low Rate Initial Production (LRIP) Defense Acquisition Board (DAB), we are reviewing the flight test program and believe some additional test time will be required prior to the start of Dedicated Initial Operational Test and Evaluation (DIOT&E). The additional test time will require EMD cost cap relief. We will complete all necessary testing prior to the start of DIOT&E to ensure that we can safely and effectively enter operational test.

Question. Do you see a ground attack mission similar to the F–15E in the F–22's future? Would this new mission require additional buys of the F–22?

Answer. An advantage of the F–22 is its inherent air-to-ground capability. The baseline aircraft at initial operational capability will be able to employ two 1,000 lb global positioning system guided weapons. This gives the F–22 an all-weather, near-precision ground attack capability. Unlike all current fighters, the F–22 doesn't sacrifice its characteristics of low observability or supercruise when loaded for ground attack, because all ordnance is carried internally. This makes the F–22 survivable and lethal against both the surface and air threat, while employing air-to-ground weaponry. The Air Force is also pursuing the acquisition of small diameter bombs, which will increase the F–22 payload to at least eight near-precision weapons.

The number of aircraft needed is a force structure decision, and is based on a strategy choice of how we will employ the aircraft.

AIRBORNE LASER

Question. The fiscal year 2001 Supplemental Appropriations request includes $153 million for the Airborne Laser program. Would you explain to us why you need an additional $153 million for this program? Is this program cost growth or program acceleration? And is there sufficient funding in your outyear budgets for the program?

Answer. The $153 million request, for the Airborne Laser (ABL) was driven by a number of factors. A contractor Estimate at Completion (EAC), performed in January, determined that fiscal year 2001 funding is short $98 million if the ABL is to remain on track for a calendar year 2003 missile shootdown demonstration. A continuing EAC performed by the contractor identified an additional $55 million required for cost growth and risk reduction activities. Of the $153 million total, $64 million is needed to pull forward to fiscal year 2001 work originally planned for fiscal year 2002. This out-of-phase work will have the added effect of reducing overall costs to the program by reducing the need to redesign systems again during the Engineering and Manufacturing Development phase of the program. An additional $64 million is attributable to cost growth created by industrial base issues, technical complexity, and system component test failures. The remaining $25 million is required to reduce overall risk to the program by purchasing additional spares and installing a secure information network across all ABL test facilities.

Current contract funding was completely expended on 23 March 2001. The ABL contractors are committed to the program and say they will continue operating at risk while awaiting resolution of the fiscal year 2001 funding shortfall.

As to whether or not there is sufficient outyear funding for ABL, beginning in fiscal year 2002, all ABL funding will transfer to the Ballistic Missile Defense Organization (BMDO). It is expected that BMDO will address ABL outyear funding as part of their overall missile defense strategy to be submitted with their fiscal year 2003 budget request.

Question. Is the Airborne Laser affordable with all the other funding priorities in the Air Force?

Answer. Beginning in fiscal year 2002, all Airborne Laser funding will transfer from the Air Force to the Ballistic Missile Defense Organization (BMDO).

B–2 SPIRIT STEALTH BOMBER

Question. On the matter of the B–2, if it were affordable would you support restarting B–2 production or would you place priority on improving the capabilities of the existing B–2 bombers?

Answer. The Department of Defense and the Air Force are currently examining the National Military Strategy. Force structure and modernization priorities, including alternatives to restart B–2 procurement or improve B–2 capability, are being considered as part of that analysis. Recommendations resulting from this review will be made available to Congress upon completion.

Question. The B–2 contractor has made an unsolicited proposal to restart B–2 production. Are you familiar with the details of this proposal and how do you assess its affordability?

Answer. The Air Force is familiar with Northrop Grumman's Letter of Offer for additional B–2C procurement and characterizes it as unaffordable in the current budget environment.

QUESTIONS SUBMITTED BY SENATOR PATRICK J. LEAHY

KC–135

Question. Can you please confirm reports that well over one-third of the KC–135 fleet is currently not operational, either resting in depots or off-line due to spare part shortages?

Answer. Yes. There are 546 aircraft in the KC–135 tanker fleet. At the beginning of June there were 151 depot possessed tankers undergoing programmed depot maintenance, major upgrades and modifications or unscheduled depot level maintenance. In addition, 99 aircraft were not mission capable for a variety of reasons. About half of these 99 not mission capable aircraft were undergoing isochronal inspections, preventive maintenance, or unscheduled repairs. The other half were not mission capable awaiting parts. Therefore, a total of 250 aircraft of the total fleet size of 546 are either depot possessed or not mission capable at field units. That is about 46 percent of the fleet not readily available to perform the mission.

Steps are being taken to reduce the total number of aircraft that are depot possessed. We expect to have that number down to 122 by the end of this fiscal year and improve upon that next year.

These numbers reflect our peacetime maintenance and modification programs. When we actually need to go to war, we can stop modifications and delay heavy maintenance to rapidly return aircraft to service. We conservatively estimate that we can reduce depot possessions by approximately 47 percent within 90 days if needed for contingency operations. Use of contingency inspections and waiver of peacetime isochronal inspections would also increase the availability of mission capable aircraft at the units.

Question. What percentage of the O&M costs are comprised by the KC–135E fleet versus the fleet of KC–135R's?

Answer. There are 547 KC–135 tankers in our inventory.

KC–135Es account for 25 percent of this fleet, and drive 28 percent of the O&M costs.

KC–135Rs account for 75 percent of this fleet, and drive 72 percent of the O&M costs.

Question. Can you please describe KC–135 maintenance in detail, including percentages of work completed in depot and base support.

Answer. Maintenance technicians at our active duty and air reserve component units perform daily inspections, repairing aircraft systems, servicing aircraft, preventive maintenance, isochronal inspections, aircraft washes, fuel cell maintenance, and some component repair.

The KC–135 is programmed for depot maintenance every five years. While it is in depot, it undergoes intense inspections and heavy maintenance. In fiscal year 2000, this process took an average of 389 days to complete, excluding outliers which were either set-aside while awaiting hangar space or that required more extensive repairs than usually encountered. So far in fiscal year 2001, we have driven average flowdays down to 364 days. Over the five-year programmed depot maintenance cycle, depot work accounts for approximately 60 percent of scheduled maintenance requirements.

Aircraft are also depot possessed when they undergo major upgrades and modifications like Pacer CRAG. Pacer CRAG upgrades or replaces the compass, radar and global positioning system (GPS) among other components. The modification is performed by depot or contract field teams at a number of locations. On any given day there are about 35 aircraft being modified with Pacer CRAG and it takes approximately 60 days to complete the modification. An additional 3 aircraft are usually in depot status for other modifications such as the reengining program.

QUESTIONS SUBMITTED BY SENATOR THAD COCHRAN

JACKSON C–17 CONVERSION

Question. Last month the Guard and Reserve Component Chiefs appeared before this Subcommittee. During testimony, Major General Weaver indicated there are funding concerns associated with the Jackson C–17 conversion. I understand the shortfalls are in excess of $170 million in Air Force funding and another $130 million in Air National Guard funding. With conversion and construction already underway, how do you plan to address these funding shortfalls?

Answer. The Air Force has recognized a shortfall at Jackson and has incorporated it into the overall C–17 program requirement. While most of the shortfall has been identified and is being worked in the fiscal year 2003 Amended Program Objective Memorandum (APOM), the exact amount of the shortfall is pending a final decision on exactly how the aircraft will be operated. We will continue addressing the Jackson shortfall in the fiscal year 2004 Program Objective Memorandum (POM) as operational details firm up.

C–17 AIRCRAFT

Question. It is my understanding that General Robertson, Commander of Air Mobility Command, and former Secretary of the Air Force Peters made visits last year to the Jackson Air National Guard Base. At that time, they both indicated that the 6 aircraft programmed for Jackson were not ideal to fully meet the mission requirements and that 8 C–17 aircraft would be preferable; I should note that Major General Weaver's testimony not only supported 8 aircraft but also suggested additional aircraft would be beneficial. Do you support these assessments?

Answer. The United States Air Force C–17 basing plan is predicated on the Defense Acquisition Board decision to procure 120 aircraft. Of those 120 aircraft, 6 will be based at Jackson Air National Guard Base with the first aircraft scheduled to arrive in July 2004. At this time we are analyzing the results of many studies to determine future airlift requirements to include an option for additional C–17s. In fact, we are presently programming for 17 additional aircraft above the 120 buy to support our training and special operations requirements, bringing our total to 137 C–17s. To accommodate these current and emerging requirements, the Air Force is examining contractual, programmatic, and budgeting issues associated with additional aircraft. We will continue to readdress our basing options, to include the Air Reserve Components, based on future procurement of additional C–17s. Please be assured we will consider our Total Force options in this process.

AIR FORCE WAY (AFWAY)

Question. I understand that the Air Force is in the process of reorganizing its computer purchasing method into a single, more efficient vehicle entitled "Air Force Way" or "AFWAY." I have been briefed that the vendor selection will be made shortly and that the expected mix of vendors will consist of large companies and a small number of disadvantaged businesses. While I applaud you for your efforts in streamlining information technology purchases, I am concerned that mid-sized companies, such as Howard Computers in Laurel, Mississippi, may be overlooked as possible vendors. What are you doing to ensure mid-sized companies are considered and included in this effort?

Answer. The Commercial Information Technology Information Product Area Directorate (CIT–PAD) is presently in the process of merging its operations with Air Combat Command's ACC Way program. The combined entity, which will take advantage of the best elements of both programs, will be entitled "AF Way." The Air Force will comply with all governing procurement laws, and is committed to adopting a vendor selection process that will ensure all businesses are given the fair opportunity to compete for a position on the AF Way roster.

To that end, an acquisition review panel chaired by the Principal Deputy Assistant Secretary (CIO-Business Information Management) met on 9 July to discuss all of the key issues surrounding the merger. Issues included the selection of vendors that will be available for use by AF Way customers, etc.

QUESTIONS SUBMITTED BY SENATOR PETE V. DOMENICI

FORCE STRUCTURE

Question. Thus far, the Rumsfeld review has been consumed by speculation. Now I understand that his strategic review will be rolled into the ongoing Quadrennial Defense Review (QDR).

Answer. We believe that will be the case for some of the studies.

Question. What, if anything, can you tell me at this stage in the game regarding force structure changes within the Air Force.

Answer. The increasing importance of aerospace power to the nation, which escalated in the post Cold War world, should provide the basis for Quadrennial Defense Review (QDR) force structure decisions. Yet, we are concerned that while the aerospace demand grows, corresponding budget share remains stagnant. Fielding a force structure that capitalizes on our asymmetrical advantages in space, stealth, long range, unmanned vehicles, and precision will require vision and statesmanship on the part of both the Department of Defense (DOD) and Congress.

Significant force structure changes will be conducted internally by the Air Force. Transformation is a process that the United States Air Force (USAF) has continued from its inception. Yet our ability to address the heightened national requirement for aerospace capabilities is largely dependent legislative and executive support. Space control is critically important, and as the national stewards of the vast majority of space assets we would like to see support for space based radar concept development. Our future force structure also must enable us to overcome the anti access threats of advanced surface to air missile systems (SAMS), advanced fighters, Theater Ballistic Missiles (TBM), cruise missiles, and Weapons of Mass Destruction (WMD). The Air Force will address this by continuing the revolutions of stealth and precision with stealthy combat platforms like F–22 and Unmanned Combat Aerospace Vehicles (UCAV) that punctuate our strong belief that only stealthy aircraft will be survivable and lethal in the future air combat environment.

Additionally, we expect technology to allow migration of Intelligence Surveillance and Reconaissance (ISR) and strike capabilities from manned to unmanned platforms and then to space vehicles. Transition to space will provide a genuine "deep look" capability and offer new options for fighting at long distances. Aggressive programs to field directed energy weapons (the Airborne Laser and Space-Based Laser) and developing the capability to process and use tremendous amounts of data while developing information operations will remain at the forefront of our research efforts. Finally, the critical shortages in our mobility capabilities will be addressed in the near term. In short, the nation requires sufficient forces to modernize our ten Aerospace Expeditionary Forces (AEFs) into fully capable, balanced AEFs, optimized for the future security environment and a new U.S. military strategy.

Question. Do you assume that the Aerospace Expeditionary Force concept as implemented will remain in place?

Answer. Yes. The Expeditionary Aerospace Force (EAF) is an integral part of our transformation. It is designed to help manage the rotation schedule for steady-state operations while preserving crisis response capability. The EAF construct helps us manage our limited resources by maximizing predictability and stability for our airmen while meeting the needs of theatre Commanders-in-Chief. Predictability increases quality of life and, therefore, retention. The Air Force will use the EAF construct during future crises to assess the build-up of forces, the most effective redeployment flow, and follow-on capabilities the Air Force can provide during force reconstitution. In addition, future concepts and programs will be framed by the EAF to ensure our ability to conduct expeditionary operations and meet challenges in the future.

Question. While I realize that many hard decisions remain to be made, I would like to request that you provide me with any information regarding proposed changes as soon as they are available.

Answer. As the Defense Review progresses, the Air Force will continue to provide you updates to force structure constructs based on emerging strategy and guidance. Our final force structure construct is dependent on the results of the Secretary of Defense's (SECDEF's) Strategic Defense Review.

SCIENCE AND TECHNOLOGY BUDGETS

Question. As I'm sure you know, I'm a big fan of Directed Energy technologies. I have heard, and last week's Pentagon briefing confirmed, that Secretary Rumsfeld will seek to substantially increase the research budgets of the Pentagon.

Over the past several years, the Air Force has underfunded its science and technology endeavors. There are several reasons for this, which I'm sure you know, but

I've been extremely concerned that the Air Force was sacrificing its future technological edge in order to meet immediate needs.

What can we expect for the Air Force science and technology budgets in 2002 and 2003?

Answer. The Air Force recognizes the historical value of Science and Technology (S&T) contributions to superior warfighting capabilities and shares Congress' concerns regarding the level of funding for S&T. In recognition of these concerns, the fiscal year 2002 President's Budget (PB) shows a marked improvement in the S&T funding compared to the fiscal year 2001 PB with a total increase of over $150 million for core S&T efforts. This increase includes gain of almost $120 million in the 6.1, Basic Research, and 6.2, Applied Research, technology base. Our 6.3, Advanced Technology Development budget activity on the whole is slightly lower due to the transfer of the Space-Based Laser program from the Air Force to the Ballistic Missile Defense Organization. The Air Force is continuing to work the fiscal year 2003 and outyear budgets for S&T.

Question. Given the recent increased attention on directed energy, especially high energy lasers, do you anticipate increased investment in this technology area in the near future?

Answer. I am also a big fan of directed energy technologies. I stated in the Forward to the recent Air Force Directed Energy Master Plan that broad directed energy science and technology (S&T) investments will provide opportunities for revolutionary changes in future military capabilities. Thus, the department has requested an increase of $15 million over last year's request in the Air Force's core directed energy S&T programs. Also, the Air Force received over $13 million this year from the Joint Technology Office for high energy laser research and we are developing proposals for additional efforts for fiscal year 2002.

Question. In light of Secretary Rumsfeld's emphasis on space, do you anticipate substantially increased budgets in the research endeavors related to protecting and fielding space assets?

Answer. In fiscal year 2002, there is increased funding within the S&T Program for protecting and fielding space assets. Specifically, we have increased research efforts in nanosatellites, super energetic propellants, plasma dynamics, materials engineering, and quantum computing.

In Applied Research and Advanced Technology Development, new initiatives include nanostructural materials for space and spacelift technologies for hypersonic flight. There also is increased emphasis on programs such as radiation-hardening of satellite components, ionospheric forecasting, space threat warning technologies, and rocket propulsion.

In addition, increases to Defense-wide S&T accounts could also apply to space. The University Research Initiative and High Energy Laser Research programs could support several relevant space-based technology efforts. Both the Defense Advanced Research Projects Agency and the Defense Threat Reduction Agency, have also received increases that could support space technology efforts.

The fiscal year 2002 President's Budget request reflects Secretary Rumsfeld's high-emphasis on space and will enable the Air Force to affordably launch and maintain our nation's military space assets.

SUBCOMMITTEE RECESS

Senator INOUYE. Our next hearing will be on June 13, at 9:30 in the morning. At that time we will hear from the Secretary of the Army and the Chief of Staff of the Army.

Ladies and gentlemen, thank you very much. The subcommittee will stand in recess.

[Whereupon, at 11:05 a.m., Wednesday, June 6, the subcommittee was recessed, to reconvene at 9:30 a.m., Wednesday, June 13.]

DEPARTMENT OF DEFENSE APPROPRIATIONS FOR FISCAL YEAR 2002

WEDNESDAY, JUNE 13, 2001

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

The subcommittee met at 9:39 a.m., in room SD–192, Dirksen Senate Office Building, Hon. Daniel K. Inouye (chairman) presiding.

Present: Senators Inouye, Dorgan, Stevens, Cochran, Specter, Bond, and Shelby.

DEPARTMENT OF DEFENSE

DEPARTMENT OF THE ARMY

STATEMENTS OF:

THOMAS E. WHITE, SECRETARY OF THE ARMY
GENERAL ERIC K. SHINSEKI, CHIEF OF STAFF, UNITED STATES ARMY

OPENING STATEMENT OF SENATOR DANIEL K. INOUYE

Senator INOUYE. The committee is pleased to welcome the Secretary of the Army, the Honorable Mr. White, and the Army Chief of Staff, General Shinseki. Gentlemen, I thank you very much for being here with us today.

As you can imagine, today is one of those crazy days. We have 15 meetings going on at the same time, and there will be another vote coming in about 10 minutes.

Secretary White, I believe this is your first appearance before the Congress as Army Secretary, and we look forward to working with you over the coming months. I trust that this will be one of the many productive meetings you will be having with our committee.

This morning's hearing is the second of our committee's review of military services. We, of course, have not received the Pentagon's final budget request for fiscal year 2002, and unfortunately, this limits our ability to fully engage the Army's needs for the coming year. However, Senator Stevens and I felt it necessary to begin to lay the foundation for our upcoming review. So, we are hoping for a full discussion of the status of Army programs this morning.

TRANSFORMATION CHALLENGES

This committee is fully mindful of the bold and challenging course the Army has chosen. This course known as "Trans-

formation" is the Army's solution to meeting today's national security threats and planning for tomorrow. The Army's transformation plan is bold because it envisions a force to meet future threats and takes concrete steps now to build that force. This plan is challenging because it must balance the need to maintain a strong and ready force today with the need to build that future force. And it is risky because it could be crippled by a lack of sufficient resources or a lack of commitment by the Department of Defense.

The road ahead is long and formidable, but I can assure you that you have the full support of this committee. Moreover, it is my hope, and I am sure that of my colleagues, that the Department's fiscal year 2002 budget request and the Secretary's strategic review will meet these challenges head on because we believe that the Nation cannot afford to pass up this opportunity. And that is why I strongly urge you, Mr. Secretary, as I have urged your counterparts in other services not to let it slip by.

Finally, the administration recently submitted a fiscal year 2001 supplemental appropriations request. We may have some questions today regarding this submission, but let me also assure you that the committee is fully aware of the urgent need for these funds.

As I indicated, Senator Stevens at this moment is at another hearing, but upon his arrival, I will call upon him to make any remarks that he may wish to provide this committee.

So, it is my great pleasure and high privilege to call upon the Hon. Thomas E. White, the new Secretary of the Army. Mr. Secretary.

SECRETARY WHITE'S OPENING REMARKS

Secretary WHITE. Thank you, Mr. Chairman. I am deeply honored to appear before you today. This is my first appearance before the U.S. Senate as the 18th Secretary of the Army since my nomination hearing last month. Mr. Chairman, I sincerely appreciate your very kind introduction and I look forward to working with you and the committee. With your permission, I will submit a statement for the record and keep my opening remarks short.

Tomorrow the Army celebrates its 226th birthday. Throughout all of those years, American soldiers have faithfully answered our Nation's call to duty and have selflessly performed every mission that the American people have asked of them. I am proud to say that the soldiers still stand ready to answer our Nation's call.

The Army has a non-negotiable contract with the American people to fight and win our Nation's wars and to be ready for any contingency. I intend, with your help, to honor that contract.

Almost 2 years ago, General Shinseki announced his bold plan to transform the Army. I fully support that plan. I can report to you today that we have made great progress in Transformation. Thanks to the aggressive support of the Congress last year, we were able to fund two Interim Brigade Combat Teams at Fort Lewis and step up our efforts in research and development.

In the short time that I have been Secretary, I have met with the leaders who are graduating from many of our fine institutions, our top non-commissioned officers academy, the Sergeants Major Academy at Fort Bliss, our Command and General Staff College graduating class, our company grade officers school at Leavenworth

and this year's West Point class. As I told them, everyone in the Army must embrace Transformation in order to make our vision a reality. Now, at a time of relative peace, is the time to embrace sweeping change.

Mr. Chairman, for almost 226 years, the Army has served our Nation faithfully. We are making use of every opportunity to maintain our commitment to our people to be ready for any mission. Transformation is the most important link between the great capabilities we have today and our ability to meet future demands.

I thank you for the opportunity to testify today. I look forward to working with the committee and I stand ready for your questions. Thank you.

Senator INOUYE. Thank you very much, Mr. Secretary.

Senator STEVENS. My apologies, Mr. Chairman.

Senator INOUYE. Good timing.

Senator STEVENS. Good morning, gentlemen.

Senator INOUYE. I now call upon the vice chairman of the committee.

STATEMENT OF SENATOR TED STEVENS

Senator STEVENS. I do join you in welcoming the Secretary and General Shinseki. I will not take the time to read my statement because I know I am late.

But I think this transformation process we have underway, that was your vision, General Shinseki, should have our complete support and we particularly are interested in seeing what it is going to do as far as our forces in the Pacific, which the chairman and I are both very interested in, as you know. I think the strategy towards Asia and the Pacific, the whole presence of our forces in the Pacific, is going to be dominated by what happens to the Army. It is my hope that you will continue to take a lead role with regard to that national strategy. I look forward to working with you and the chairman and with our staffs cooperating with you in every way possible.

I was pleased to visit with you yesterday, Mr. Secretary. I appreciate your courtesy in coming by. We look forward to giving you an opportunity to do a little marine research in Alaska with me one of these days.

Secretary WHITE. Yes, sir.

Senator STEVENS. That is a very essential capability that must be developed in all Secretaries. So, we will get at that quickly.

I do want to note that one of our new appointees is appearing before the Government Affairs Committee this morning, Mr. Chairman. I will have to leave here in about an hour.

Thank you very much, and I appreciate your courtesy.

Senator INOUYE. I thank you very much.

General Shinseki, as you can imagine, the matter foremost in our minds is Transformation. In the last go-around this committee, in order to demonstrate our support, appropriated an additional $600 million. Can you give us an overview of what has happened in Transformation to date?

GENERAL SHINSEKI'S OPENING REMARKS

General SHINSEKI. Sir, I will.

Mr. Chairman and Senator Stevens, let me begin by congratulating you, Mr. Chairman, on your new role. Our many dealings with this subcommittee have shown the great partnership between you and Senator Stevens is, in fact, a co-chairmanship. It does not matter where you sit. As Senator Stevens has reminded me on more than one occasion, if you have talked to one, you have talked to both. So, we look forward to working with both of you and members of this subcommittee as we continue our efforts to assure the readiness of the force and also to take better care of our people.

It is also an honor for me to appear today with our new Secretary. Secretary White is no stranger to the Army, as you both know, having had a long and distinguished career in uniform. He and I both patrolled the interzonal German border together during the Cold War, at times even together. It is great, once again, to be serving side by side with him.

Let me respond to your question, Mr. Chairman, by reporting that that magnificent Army that we talked to you about, those soldiers on point today, about 122,000 stationed overseas, every day about 30,000 soldiers are on deployment away from their home stations. We are mighty proud of all of them, and it is their selfless service that guarantees the freedoms we all enjoy.

The Army's fundamental purpose, to reiterate a statement here by the Secretary, is to conduct prompt and sustained land combat operations, in other words, to be ready to fight and win our Nation's wars decisively. Now, this kind of readiness is what provides our National Command Authorities and the warfighting Commander in Chiefs (CINCs) with the flexibility to respond to and resolve crises as they occur.

In order to better meet our warfighting commitments, the Army is, as you have noted, Mr. Chairman, transforming itself into a force that will be more strategically responsive and just as dominant across the full spectrum of military operations as our force is today. Over the past 2 years, thanks to this subcommittee and the generous bipartisan support of the entire Congress, we have built sustainable momentum for that transformation.

Transformation, as we have discussed in the past, includes three broad initiatives: the readiness of the current force, the Legacy Force we talk about; the science and technology effort to achieve the Objective Force before the end of this decade, that future capability; and then finally, the creation of an Interim Force to bridge the operational gap that exists today in our capabilities.

As you know, we have started standing up two Interim Brigade Combat Teams at Fort Lewis, Washington, and in conjunction with this initiative, we have also conducted other experimental exercises, one called the Advanced Warfighting Experiment with the 10th Mountain Division at Fort Polk, Louisiana, another with the 4th Infantry Division in a Division Capstone Exercise at the National Training Center, in a force on force, contested exercise to see what kind of capabilities we derive. We will conduct phase two of that Division Capstone Exercise with the 4th Infantry in October at Fort Hood, Texas. These exercises have demonstrated that we have, in fact, increased our combat effectiveness through advanced technologies and improved leader development and warfighting concepts.

We are also moving forward with the Objective Force. Thanks to the members of this committee, the fiscal year 2001 appropriations bill generously funded our science and technology effort. We have focused well over $500 million of that investment on developing Future Combat Systems technologies that will allow us to make decisions and begin research and development on those discoveries in the 2003–2004 time frame.

The third vector in our Transformation campaign is focused on combat readiness of our current Legacy Force, today's Army that you see when you go and visit our operations. Today our major combat systems are aging. Seventy-five percent of them exceed their expected half-life. Aging equipment means increased operations and maintenance costs. Those costs have grown 30 percent in the last 4 years alone. Aviation safety of flight messages have gone up over 200 percent since 1995.

To combat these spiraling costs, we have identified 21 systems that must be recapitalized in order to extend their useful readiness. So, as we pursue future technologies for the Objective Force we seek, we look for your continued support in helping us to also maintain current readiness by recapitalizing our aging fleets.

We are grateful for this committee's commitment to improving also the well-being of our soldiers and their families. Your efforts to tackle health care improvements, increased pay, improved educational benefits, and invest in our facilities is making a difference in the lives of our soldiers, civilians, retirees, and their families. Still, our infrastructure is decaying. We hope that the budget will address this challenge, but I want you to know that we are aware of the problem and we are committed to fixing it.

The President has submitted a supplemental appropriations request that covers our most critical needs for the remainder of this fiscal year. It provides the majority of our executable operations and maintenance requirements in fiscal year 2001.

We are working closely with the Department of Defense to identify alternatives for any remaining shortfalls. Among the options under consideration is an increase in obligational authority for the Army and an omnibus reprogramming. I am confident that these efforts will be successful.

We understand that you are working quickly to mark that supplemental and we thank you for that help. We have taken your counsel and we are not curtailing operations. We trust that you will pass the supplemental quickly, as you did last year, so that we can maintain the readiness of the force.

Mr. Chairman, this Army vision is about an investment in future Army leadership and security at home and abroad.

PREPARED STATEMENT

Thank you for your invitation to appear before this subcommittee today, and I look forward to your questions.

[The statement follows:]

JOINT PREPARED STATEMENT OF THOMAS E. WHITE AND GENERAL ERIC K. SHINSEKI

Mr. Chairman and distinguished members of the Committee, we thank you for this opportunity to report to you today on the United States Army's readiness to provide for our Nation's security today and in the future.

The Army exists for one purpose—to serve the Nation. For over 225 years, American Soldiers have answered the Nation's call to duty, faithfully and selflessly performing any mission that the American people have asked of them.

Throughout that time, The Army—active component, Army National Guard, U.S. Army Reserve, and Army civilians—has maintained its non-negotiable contract with the American people to fight and win the Nation's wars decisively. Indeed, The Army stands ready to go into harm's way whenever and wherever we are asked. Today, The United States Army is the most formidable land force in the world, a fact that reassures allies and deters adversaries.

Today, The Army must also be capable of executing the broader requirements of the National Security Strategy and National Military Strategy across the full spectrum of operations. The commitment and dedication of Army soldiers and civilians, coupled with the support of the Administration and Congress, are allowing The Army to meet its requirements as the decisive landpower component of the U.S. military.

The bipartisan support of Congress during the past two years has helped The Army build much needed momentum for its Transformation. We want to talk to you today about where we are in achieving The Army Vision. In our testimony, we will describe the magnificent work the Army has done in recent months and identify the challenges we still face. There is much work to be done, but The Army has moved out. It is transforming in comprehensive and profound ways to be the most strategically responsive and dominant land force of the 21st Century—decisive across the entire spectrum of military operations.

Today, The Army's active component "go-to-war" force is forward stationed, deployed, or in the field—advancing our national interests, supporting theater engagement plans, and training for tomorrow's warfight. But, our Army is one-third smaller, deploys more frequently, and is more likely to conduct stability and support operations than its Cold War predecessor. Accelerating operational and deployment tempos have strained Army capabilities, and over-stretched resources have leveraged our warfighting readiness on the backs of our Soldiers and their families. Indeed, our tempo creates a demand for forces that increasingly can only be sustained by committing the reserve components. When we speak of The Army—active and reserve components, soldiers, civilians, family members, retirees, and veterans—we are acknowledging a single force with common missions, common standards, and common responsibilities.

The Army has competing requirements that are in constant, daily tension. First is The Army's requirement to have a trained and ready force to fulfill its non-negotiable contract with the American people to fight and win our Nation's wars decisively. That mission is significantly enhanced by being fully engaged around the globe with our allies, partners, and sometimes our potential adversaries to promote stability, to gain influence, and to ensure access in times of crisis. Further, as contingency operations become long-term commitments, our mission tempo—both training and operational—increasingly strains our force structure. Second, but most important, The Army must transform itself into a force for the 21st Century, strategically responsive and dominant at every point on the spectrum of military operations and prepared to meet a growing spectrum of requirements including threats to our homeland. The mismatch between strategic requirements and operational resources forces us daily to prioritize among support for our people, the readiness demanded by the Nation, and the transformation necessary to continue our global preeminence.

More than ten years ago, during the buildup of Operation Desert Shield, The Army identified an operational shortfall—a gap between the capabilities of our heavy and light forces. Our heavy forces are the most formidable in the world. There are none better suited for high-intensity operations, but they are severely challenged to deploy to all the places where they might be needed. Conversely, our magnificent light forces are agile and deployable. They are particularly well suited for low-intensity operations, but lack sufficient lethality and survivability. There is, at present, no rapidly deployable force with the staying power to provide our national leadership a complete range of strategic options. The requirements dictated by the rapidly evolving world situation increasingly underscore that capability gap; therefore, The Army is changing.

The Army Vision

To meet the national security requirements of the 21st Century and ensure full spectrum dominance, The Army articulated its Vision to chart a balanced course and shed its Cold War designs. The Vision is about three interdependent components—People, Readiness, and Transformation. The Army is people—Soldiers, civilians, veterans, and families—and Soldiers remain the centerpiece of our formations.

Warfighting readiness is The Army's top priority. The Transformation will produce a future force, the Objective Force, founded on innovative doctrine, training, leader development, materiel, organizations, and Soldiers. The Vision weaves together these threads—People, Readiness, and Transformation—binding them into what will be The Army of the future.

Achieving the Army Vision

Last year, The Army took the initial steps to achieve the Vision. One step was the continued realignment of our budget priorities, generating investment capital by canceling or restructuring eight major Army procurement programs. Unfortunately, The Army has had to eliminate or restructure 182 programs over the past decade and a half. It is not that these systems and capabilities were unnecessary; rather, our resource prioritization made the programs unaffordable. Joining with the Defense Advanced Research Projects Agency in a cooperative research and development effort, we began to streamline our acquisition process to focus and accelerate the development and procurement of enabling technologies for our Objective Force. To reduce the risk from the capability gap between our heavy and light forces, The Army developed a concept and began to organize an interim capability until the 21st Century Objective Force is fielded. The Army also completed a comprehensive study of how it trains Soldiers and grows them into leaders, knowing that the capabilities of a transformed Army will reside in competent, confident, adaptive, and creative people.

People

The Army is people, the core of our institutional strength. The well-being—physical, material, mental, and spiritual state of soldiers, families, and civilians is inextricably linked to The Army's capabilities, readiness, and its preparedness to perform any mission. To improve well-being, we are offering technology-based distance learning opportunities; working to improve pay and retirement compensation; working with the Department of Defense to guarantee that TRICARE meets the needs of our soldiers, retirees, and their families; improving facilities maintenance; and modernizing single soldier and family housing. The health care provisions in the Fiscal Year 2001 National Defense Authorization Act for our soldiers, retirees, and family members represent the types of significant improvements The Army will seek for the force's well-being. Sustained Congressional support for important well-being initiatives helps us recruit and retain a quality force. Indeed, the pay raise, pay table reform, and retirement reform, as well as diligent efforts by leaders at all levels of The Army helped us exceed our recruiting and retention goals in fiscal year 2000. Attention to the well-being of our people will keep trained and qualified Soldiers and civilians in The Army in the years to come.

Manning

In fiscal year 2000, we started a four-year effort to increase personnel readiness levels. The Manning Initiative redistributed soldiers to fill all personnel authorizations in every active component combat division and cavalry regiment, but in doing so, we accepted some risk in the institutional base. This effort exposed the serious gap that has existed in the aggregate between manning requirements and authorizations. It is possible that we will need to increase personnel authorizations to meet all requirements, dependent upon ongoing reviews of overall Army missions. Meeting the requirements with the active component, however, is not enough. As mission demands necessitate increased use of our reserve components, we must bolster their full-time support requirements to better keep them ready and available. Manning the entire force will reduce operational and personnel tempo and improve both readiness and well-being.

Global Engagement

Readiness is a top priority. It means we must be prepared to execute strategic missions across the full spectrum of operational requirements around the globe. Our military formations must be able to conduct a range of activities from engagement to stability and support operations to warfighting. On any given day, The Army has nearly 125,000 soldiers and 15,000 U.S. civilians forward stationed in over 100 countries around the world. In fiscal year 2000, on a daily average, we deployed more than 26,000 additional soldiers for operations and military exercises in 68 countries—from East Timor to Nigeria to the Balkans. In Bosnia, the Texas Army National Guard's 49th Armored Division assumed the mission for the Multinational Division (North), the first time since World War II that a reserve component division headquarters has led active component forces in an operational mission. In both Europe and Korea, Army Soldiers continue a successful security commitment made 50 years ago. In Southwest Asia, The Army continues its support of United

Nations sanctions against Iraq, stability operations in the Persian Gulf, and peacekeeping efforts in the Sinai. No other military service works as frequently, as continuously, or on as many levels to deter aggression, operate with allies and coalition partners, and to respond at home and abroad with support to civil authorities.

Civil Support

The Army provides military support to civil authorities, both domestically and around the globe, for crisis response and consequence management. Army support after natural disasters ranged from personnel and equipment to suppress wildfires to logistical and medical support following the disasters in the South African, Central American, and Asian Pacific regions. Last year, within the United States, the U.S. Soldier and Biological Chemical command trained over 28,000 people and conducted crisis response and consequence management exercises in 105 cities with federal agencies, state and local governments, and non-government organizations in support of the Domestic Preparedness Program. The Army Corps of Engineers prevented an average of $21.1 billion in damages through flood control management projects including 383 major flood control reservoirs and 8,500 miles of flood control levees as part of its flood fighting authority and the Federal Response Plan. The Army supported civil law enforcement agencies in more than 380 counter-drug operations in 41 states. Finally, as part of a joint program, The Army led the development and testing of a fixed, land-based National Missile Defense system that offers the most mature technology for a near-term deployment decision. The Army stands ready to respond to the full breadth of security requirements in the homeland and abroad now and in the future.

Readiness

Measuring the readiness of The Army to respond to the Nation's call requires accuracy, objectivity, and uniformity. Our current standards are a Cold War legacy and reflect neither the complexity of today's strategic and operational environments nor other important factors. Near-term factors encompass the overall capability of units to deploy and include training enablers such as training ranges, institutional support, and depot maintenance; full time support for our reserve components; and installation support. Long-term readiness factors affect The Army's ability to fight in the future and to retain quality personnel. We are re-examining how to measure Army readiness in the near-term, the long-term, and across the range of missions we may be expected to undertake. This new reporting system will provide timely and accurate information on the status of The Army's readiness, with measurements that are relevant and quantifiable, to enhance the ability of commanders to make the best possible employment decisions. It will also give the American people a more accurate assessment of how ready their Army is to do what it is asked to do.

Installation Readiness

Installations are an essential, but often overlooked, part of our warfighting readiness. They support Soldiers and their families, enhance the rapid deployment of The Army, and provide efficient and timely support to deployed formations. Funding facility Sustainment, Restoration and Modernization (SRM, formerly termed Real Property Maintenance, or RPM) accounts is one of The Army's greatest concerns this year. We must maintain, modernize, and transform the training platforms and ranges that prepare the force; the depots and arsenals that maintain and equip the force; and the power projection platforms and information infrastructures that support the force when deployed. Only by taking care of installation infrastructure now can The Army secure readiness for the future also.

In the past, we paid other bills at the expense of facilities upkeep or masked these costs by migrating funds from operating tempo accounts—a practice we have stopped. The Army would prefer to divest itself of excess infrastructure and receive full funding to maintain installations and repair critical facilities. The Army's current goal is to sustain facilities to a level that prevents further deterioration and to improve both the quality and the quantity of facilities to meet validated deficits in strategic mobility by fiscal year 2003, barracks by fiscal year 2008, and family housing in fiscal year 2010. However, even with this significant investment, our overall infrastructure condition continues to decline. Previously, we have funded SRM at only 60 percent, and we still cannot afford to fund at 100 percent, so conditions are getting continually worse. We currently have an unfunded SRM backlog of $17.8 billion and an unfunded facilities deficit of $25 billion. The solution requires a 30-year commitment to fully fund and focus SRM funding on selected facility types, in ten-year increments. Army installations will take on a greater role as we attempt to reduce the deployed logistical footprint and rely on reach-back links for enhanced command and control capabilities. Transformation of our operational force

without a concurrent renovation of the installation infrastructure will create an imbalance that will impinge on advantages gained by a transformed force.

Transformation

The third thread of the Vision requires a comprehensive transformation of the entire Army. This complex, multi-year effort will balance the challenge of transforming the operational force and institutional base while maintaining a trained and ready force to respond to crises, deter war and, if deterrence fails, fight and win decisively. Transformation is far more extensive than merely modernizing our equipment and formations. It is the transformation of the entire Army from leader development programs to installations to combat formations. All aspects—doctrine, training, leaders, organization, material, and Soldiers—will be affected.

Transformation of The Army's operational force proceeds on three vectors—the Objective Force, the Interim Force, and the Legacy Force. All are equally necessary to our Nation's continued world leadership. The Objective Force is the force of the future and the focus of The Army's long-term development efforts. It will maximize advances in technology and organizational adaptations to revolutionize land-power capabilities. The Interim Force will fill the current capability gap that exists between today's heavy and light forces. Today's force, the Legacy Force, enables The Army to meet near-term National Military Strategy commitments. Until the Objective Force is fielded, the Legacy Force—augmented or reinforced with an interim capability—will continue to engage and respond to crises to deter aggression, bring peace and stability to troubled regions, and enhance security by developing bonds of mutual respect and understanding with allies, partners, and potential adversaries. It must remain ready to fight and win if necessary, giving us the strategic hedge to allow transformation.

As The Army works to develop and acquire the technologies for the Objective Force, the Legacy and Interim Forces will guarantee Army readiness. Our most pressing concerns this year include the modernization and recapitalization of selected Legacy Force systems.

Legacy Force Modernization & Recapitalization

We must judiciously modernize key armored and aviation systems in the Legacy Force to enhance force capabilities. We will further digitize the Abrams tank to increase situational awareness and remanufacture early model Bradley infantry fighting vehicles to improve lethality, situational awareness, and sustainability. We will procure new systems like the Crusader howitzer to increase force effectiveness, reduce friendly casualties, ease logistics support requirements, and improve deployability. Crusader will maximize the total capabilities of the Legacy Force. Fielding the Patriot Advanced Capability-3 missile defense upgrade and the Theater High Altitude Area Defense system will significantly increase our in-theater force protection. Current legacy forces will benefit from upgrades and enhancements to proven systems. Interim forces will demonstrate the power of developmental and off-the-shelf communications and intelligence capabilities. The Army has made the hard decisions for selective modernization to sustain combat overmatch. What is needed is continued support for our prudent investment strategy to keep our force strong and credible.

Concurrently, The Army will selectively recapitalize Legacy Force equipment to combat the rapid aging of our weapons systems. The Army has determined that we preserve readiness best and most cost effectively when we retire or replace warfighting systems on a 20-year Department of Defense modernization cycle. Today, 12 of 16 critical weapons systems exceed this targeted fleet average age. As systems age, they become more costly and difficult to maintain in peak warfighting condition. They lose combat overmatch with respect to an adversary's modernized systems. The Army has established a selective recapitalization program that will restore aging systems to like-new condition and allow upgraded warfighting capabilities for a fraction of the replacement cost. We must maintain the readiness of the Legacy Force until the Objective Force is operational. As the Legacy Force maintains our strategic hedge and the Interim Force bridges the capability gap, The Army will build the Objective Force and complete the Vision for a trained and ready 21st Century Army.

The Interim Force

The fielding of the Interim Force fills the strategic gap between our heavy and light forces and is an essential step toward the Objective Force. The key component of the Interim Force is the Interim Brigade Combat Team (IBCT), the first of which is being organized at Fort Lewis, Washington. Its primary combat platform, the Interim Armored Vehicle (IAV), will fulfill an immediate requirement for a vehicle that is deployable any place in the world arriving ready for combat. The IAV will

consist of two variants, a mobile gun system and an infantry carrier with nine configurations. The IAV will achieve interoperability and internetted capability with other IBCT systems by integrating command, control, communications, computer and intelligence, surveillance, and reconnaissance systems. Congress supported the IBCT concept with an additional $600 million in the Fiscal Year 2001 Defense Appropriations Act for IAV procurement and organizing the second IBCT. The Army will program resources to field six to eight IBCTs.

The Army will train and test Soldiers and leaders in the doctrine and organization of these new units to ensure that they can respond to operational requirements. An IAV-equipped battalion-sized element will undergo training and initial operational testing and evaluation to guarantee system suitability and effectiveness. Innovative applications and technology insertion in supporting forces will complete the IBCT package and enable full operational capabilities for the first IBCT in 2005.

The Objective Force

The Army's ultimate goal for Transformation is the Objective Force. Operating as part of a joint, combined, and/or interagency team, it will be capable of conducting rapid and decisive offensive, defensive, stability and support operations, and be able to transition among any of these missions without a loss of momentum. It will be lethal and survivable for warfighting and force protection; responsive and deployable for rapid mission tailoring and the projection required for crisis response; versatile and agile for success across the full spectrum of operations; and sustainable for extended regional engagement and sustained land combat. It will leverage joint and interagency reach-back capabilities for intelligence, logistical support, and information operations while protecting itself against information attacks. It will leverage space assets for communications; position, navigation, and timing; weather, terrain, and environmental monitoring; missile warning; and intelligence, surveillance, and reconnaissance. The Objective Force will provide for conventional overmatch and a greater degree of strategic responsiveness, mission versatility, and operational and tactical agility. With the Objective Force, The Army intends to deploy a combat-capable brigade anywhere in the world in 96 hours, a division in 120 hours, and five divisions in 30 days. Our ability to quickly put a brigade-size force on the ground, with the balance of a division following a day later, fills a current gap for credible, rapid deterrence. The Objective Force will offer real strategic options in a crisis and changes the strategic calculations of our potential adversaries. The Army with Objective Force capability will provide the National Command Authorities with a full range of strategic options for regional engagement, crisis response, and land force operations in support of the nation.

Science and Technology

Advances in science and technology will lead to significantly improved capabilities for the Objective Force. The Army is programming over $8 billion for science and technology efforts to begin fielding the Objective Force by the end of the current decade. This effort seeks to resolve a number of challenges: how to balance sustained lethality and survivability against ease of deployability; how to reduce strategic lift requirements and logistical footprint required in-theater; how to mitigate risk to our support forces and to forces in-theater; and how to ensure digitized, secure communications to provide battlefield awareness at all levels of command. The Army will find the best possible answers while maintaining the ready, disciplined, and robust forces our Nation demands, our allies expect, and our adversaries fear.

Future Combat Systems (FCS), a system of systems, is one of the essential components for The Army's Objective Force. To accelerate development of key technologies, The Army partnered with the Defense Advanced Research Projects Agency in a collaborative effort for the design, development, and testing of FCS while simultaneously redesigning the force. Forces equipped with FCS will network fires and maneuver in direct combat, deliver direct and indirect fires, perform intelligence, surveillance, and reconnaissance functions, and transport Soldiers and materiel. Over the next six years, The Army will demonstrate and validate FCS functions and exploit high-payoff core technologies, including composite armor, active protection systems, multi-role (direct and indirect fire) cannons, compact kinetic energy missiles, hybrid electric propulsion, human engineering, and advanced electro-optic and infrared sensors.

Equally essential to the Objective Force is the fielding of the Comanche helicopter beginning in 2006. Comanche is the central program of the Army aviation modernization plan and a prime example of existing modernization programs with significant value for Objective Force capability. Although Comanche will be fielded as part of the Objective Force, its digitization will be compatible with Legacy and In-

terim Force systems. Comanche will provide a lethal combination of reconnaissance and firepower.

Institutional Transformation

As the combat formations are being transformed, The Army's institutional base—schools, services, facilities, and installations—must also change to support both the Objective Force and current mission requirements. The U.S. Army Training and Doctrine Command produces tactically and technically proficient Soldiers and leaders and the doctrine and concepts for operational success. The Army must train Soldiers—in simulations, on ranges, and in exercises—and grow them into leaders who are capable of executing rapid and seamless transitions between missions throughout the spectrum of operations. Training must continuously improve and respond to emerging technologies. We must recapitalize and modernize ranges, distance learning centers, Army schools, and combat training centers to keep pace with changes in force structure, technology, and the global environment. We must address the increasing challenge to readiness posed by encroachment to our ranges and training areas while maintaining our environmental stewardship of these same lands.

Army doctrine and concepts must also transform to keep pace with our changing operational force and growing technological advantages. As foundations for the Transformation, the two conceptual baselines for Army doctrine, Field Manuals, FM–1, The Army, and FM–3, Operations, will be published June 14, 2001. The Training and Doctrine Command is revising and developing doctrine for organization and operation of the Interim Force and validating concepts for the Objective Force. We are also developing the concepts to integrate the capabilities of space and information operations to provide support across the entire spectrum of military operations. At every level, The Army is integrating emerging joint and multinational doctrine to develop the concepts that will field a force, grounded in doctrine, that is capable of providing the National Command Authorities a range of options for regional engagement, crisis response, and sustained land force operations.

Army Training and Leader Development

Key to transformation is the training and leader development necessary for producing adaptive Soldiers and leaders who can lead and succeed in both joint and combined environments while capitalizing on the latest battlefield technologies. The Army Training and Leader Development Panel (ATLDP) has concluded its in-depth study of issues affecting The Army's culture and its training and leader development doctrine. The ATLDP surveyed and interviewed over 13,500 officers and spouses. Follow-on studies of the noncommissioned officer and warrant officer corps will be conducted over the next six months. The primary objectives of the panel were to identify skill sets required of Objective Force leaders and to assess the ability of current training and leader development systems to cultivate those skills. Study participants addressed issues that included well-being, job satisfaction, training standards, and the officer education system. This study represents a candid self-assessment by The Army; it seeks to restore faith with Soldiers and set a course for improving all aspects of The Army's culture by bringing institutional beliefs and practices in line. To that end, some steps have already been taken, including adapting the Officer Education System to meet the needs of the transforming Army; eliminating non-mission compliance tasks that interfere with war fighting training; allocating full resources to our Combat Training Centers; and protecting weekends for the well-being of soldiers and their families. It is a testament to the strength of any organization when it is willing to take such a candid look at itself, and this kind of healthy introspection characterizes a true profession.

Logistical Transformation

We will transform logistical services and facilities to enhance readiness and strategic responsiveness. Today, logistics comprises approximately 80 percent of The Army's strategic lift requirement, creating a daunting challenge to deployability. Prepositioning stocks and forward presence solves only part of the problem. Currently, The Army has seven brigade sets of equipment forward deployed on land and at sea with an eighth brigade set being deployed in fiscal year 2002. As we fundamentally reshape the way The Army is deployed and sustained, we will ensure logistics transformation is synchronized with the needs of the operational forces and supports Department of Defense and Joint logistics transformation goals. The Army is examining how to reduce the logistical footprint in the theater of operations and to reduce logistical costs without hindering warfighting capability and readiness. Approaches already being explored are recapitalization, common vehicle chassis design, a national maintenance program, and an intermediate basing strategy for force protection. We are synchronizing the critical systems of the institutional Army with

our operating forces to ensure the Transformation of The Army is holistic and complete.

Conclusion

The Army has embarked on a historic enterprise. Recognizing that the forces we can provide to the combatant commands are becoming obsolescent in a changing strategic environment, The Army is transforming. With the support of the Administration and Congress, The Army has charted a course that will better align its capabilities with the international security environment, enhancing responsiveness and deterrence while sustaining dominance at every point on the spectrum of operations. The Army Transformation is the most comprehensive program of change in a century and is already underway. It comes at a propitious moment. We live in a time of relative peace. Our Nation's economic strength has given us a period of prosperity. A decade of post-Cold War experience has provided us strategic perspective and American technological power gives us tremendous potential. We have seized this opportunity to guarantee our strategic capability and our non-negotiable contract with the American people well into this century.

Mr. Chairman and distinguished members of the Committee, we thank you once again for this opportunity to report to you today on the state of your Army. The statements made in this testimony are contingent upon the results of Secretary Rumsfeld's strategic review. We ask you to consider them in that light. We look forward to discussing these issues with you.

Senator INOUYE. Thank you very much, General.

Before proceeding, Senator Specter.

ARMY MUSEUM AND GRIZZLY SYSTEM

Senator SPECTER. Thank you very much, Mr. Chairman. I wanted to join you in welcoming the Secretary and the Chief of Staff and to state my cooperation in working on the supplemental.

I am going to be submitting two questions for the record, but I will briefly reference the issues. I have already talked to Secretary White about the museum in Carlisle where we have had a commitment from the Department and the last Secretary. As is the case in Washington, nothing ever seems to be settled, and this is part of an effort to have something outside of the Washington, D.C. area. We have talked about it. We would like to move ahead on this project because it is a matter of great concern.

One other parochial matter, on the Grizzly program where we put in $15 million last year, I will be submitting a more extensive question for the record.

I join my colleagues in thanking you for your service, and we will be helping.

Thank you very much, Mr. Chairman.

Senator INOUYE. Thank you very much.

I notice there is a vote going on. So, let us get down to business right away.

When will the Interim Brigade be ready for combat and what will be the primary mission?

INTERIM BRIGADE COMBAT TEAM FIELDING

General SHINSEKI. Well, an exact date on that Interim Brigade Combat Team is subject to the fielding plan that we are in the process of developing. As you know, there was a hold on production until a protest was resolved. Right now, it appears that at the earliest a full fielding of that Interim Brigade Combat Team occurs in the spring of fiscal year 2003. Correction: in the spring of calendar year 2003, shortly before I depart, in the May timeframe, where it would go for a full initial operations capability shake-out. At that

point, all things working, as I trust they will, it would be ready for an operational deployment.

That operational deployment could be for a scenario that had a light force going in early with this brigade coming in to reinforce it and follow it by a heavy tank brigade behind it. So, it would be part of a larger deployment if it involved a warfight scenario. If it were for a contingency, that brigade should be able to go on its own and handle a wide range of missions.

Right now, the spring of calendar year 2003 is when the fielding plan comes together. We are working very hard with the production folks to try to move that as far to the left as we can. I will have a better date here sometime this summer.

Senator INOUYE. Mr. Secretary, transformation obviously calls for a change in just about every aspect of Army life, everything from infrastructure on to training. With your vast corporate management experience, do you have any ideas on how this management transformation can be carried out?

Secretary WHITE. Mr. Chairman, I think that, first, we have to decide what the core and the non-core activities of the Department are, just like any business. And for those activities that we decide are non-core, we have to make decisions as to whether we continue to do those in-house or whether we seek partners in the private sector who can bring a better value proposition, better service at a lower price. I think the initial indications are that we are being very successful in family housing privatization, for example. I think utilities privatization is another area. I think there's a whole range of what I would deem to be non-core activities that we should seek help and support with from the private sector, and that is what I intend to pursue.

Senator INOUYE. General Shinseki, do you have anything to add?

General SHINSEKI. I would only add that in terms of the transformation efforts at fielding equipment, we have very aggressively challenged the processes that we have in place today, both for acquisition and testing and evaluation and fielding. There seems to be a time factor applied to the process that I need to understand a little better because it also involves an extended fielding period. It also involves increased costs. I think along with the Secretary's interest about deciding what are core Government operations and what can be privatized, I think we also want to look at efficiencies in how we acquire, produce, and field equipment. I think there is good reason to take a review of those processes.

Senator INOUYE. I have many other questions, but Senator Stevens.

Senator STEVENS. We do not have much time on this first vote.

As you stated, General, we provided I think $300 million for weapons and combat vehicles and $200 million for the other procurement account for your transition. Is that enough money to proceed and keep the schedule you just outlined?

General SHINSEKI. That will take care of the brigades that are identified for production, the first two. As you know, we have a requirement to fulfill a comparison evaluation before we can have a decision to go to the third brigade. We are now trying to cost that test, but that money does not fully meet our requirements for fielding those brigades. We will be looking for additional help.

OBJECTIVE FORCE FIELDING

Senator STEVENS. Is 2008 still your target for the total Objective Force for the mark for completion of that transition?

General SHINSEKI. Yes, sir. Again, this is a mark on the wall. It is the near side of that time frame, 2008–2010, where we are intending to look at fielding that future Objective Force before the end of the decade. Our intent is to begin that process in 2008. Right now, a 2008 date is, I would say, front soft because we are at this point investing in finding the technologies that would give us the capabilities to produce the hardware. So, that is a mark on the wall for us.

Senator STEVENS. Secretary White, I was a little facetious with you, but I was pleased to learn yesterday Mark Hamilton, our distinguished President of our University of Alaska now and former general, was your classmate.

Secretary WHITE. Yes, sir.

Senator STEVENS. Have you had occasion yet to find out if we are going to get support from Office of Management and Budget (OMB) for the Apache AH–64 for a multiyear acquisition program that we initiated?

Secretary WHITE. Senator Stevens, I am not sure. I know if it is a 2002 budget issue, those discussions are still going on today, as a matter of fact, with OMB, and hopefully they will be concluded shortly.

ACTIVE COMPONENT/RESERVE COMPONENT INTEGRATION

Senator STEVENS. We are quite interested here in this committee also in the AH–64 transition for the Army Guard. I have been very pleased with the way the Army, under General Shinseki, has welcomed the new total force partnership with the National Guard. Do you concur in those opinions?

Secretary WHITE. I most certainly do, Senator. We have one Army. I must say as the new guy, being gone 11 years, when I look at the relationship between the Guard and the Reserve—and, of course, General Shultz and General Plewes are with us today. They will be promoted this afternoon to a 3-star rank, reflecting the importance of those components of the total Army. I am very encouraged by the way the Guard and the Reserve and the active are integrated today, and it is my intention to promote that.

DEFERRED FUNDING

Senator STEVENS. I guess we ought to go, but one of the last questions I would ask is when we went after the balanced budget concept in the late 1990's, many people made statements that once we stopped paying so much interest on the national debt, that we would have available money to catch up with the things we deferred at that time. We have deferred for several years the proper funding of the real property and equipment operation and maintenance funds for the Army. I think more than any other service it has been underfunded in terms of the costs of maintenance of particular facilities and their vehicles.

Have you had an opportunity to look into that problem, the level of it and the gigantic size of this unfunded liability that we have? Have you?

Secretary WHITE. Yes, I have, Senator, in a preliminary sense. And I agree with you. If you look at real property maintenance, if you look at spares, we have not adequately funded those, and I am hopeful that the 2002 budget revision will reflect a strong commitment by the Secretary and the President to fixing this readiness issue.

Senator STEVENS. Well, I hope so because some people around here where we live cannot seem to remember what they said when we balanced the budget by deferring accounts. And it is true we did. The difficulty is that we have not been able to go back and catch up now using the money that otherwise would have been used to pay interest and not fulfill any mission as far as the military is concerned. I hope that you will be a voice in that series of meetings with the Secretary to ensure that we have sufficient funds for catching up with that major issue of operations and maintenance.

Secretary WHITE. I will, Senator, and I must say in all the discussions we have had to date, that Secretary Rumsfeld is intensely interested in this subject.

Senator INOUYE. If I may, Mr. Secretary and General, call a short recess. We will have to go to vote. We will be right back.

LEGACY FORCE MODERNIZATION

General Shinseki, you have indicated in your testimony that one of the most pressing concerns is modernizing the Legacy Force. As you know, your Army is the most capable ground force in the world. One of our concerns is that in your effort to modernize the Legacy Force, would it mean that you would take away resources from the transformation program?

General SHINSEKI. No, Mr. Chairman. Of course, you never have enough to do both. So, for the Secretary and me, we have to balance the requirements. But our priority is on transformation, and that is where we intend to put our energy both in science and technology investments, driven at a faster acquisition pace. I look to the Secretary to help, with his business background, how we do that better, faster, and more efficiently.

Getting to that future Objective Force that we are trying to transform is a matter of time and dollars. We have said we are going to do that before the end of this decade, and we have invested very heavily in science and technology so that in about 2003–2004 we have the answers to the questions we have asked that will lead to research and development to get to that Objective Force capability. The luxury of having the time to do that right, to come out with the right answers, the luxury of that time rides on the readiness of the legacy force today. So, there is an amount of funding, resourcing that needs to be invested in that Legacy Force to make sure that it can meet that non-negotiable contract with the American people every day for the next 10, 12 years, however long it takes us to begin to pick up momentum in Transformation, that today's Army can fight and win wars and allow us the opportunity to get this right.

We have focused our recapitalization efforts. We have focused our modest modernization investments into a single core, one of four that we call the counter-attack force, and that is where we are going to put, for the next 10 years or so, our primary focus in terms of keeping us ready to do the Nation's business and at the same time invest in that future Objective Force so we get as much energy going there.

FORCE STRUCTURE

Senator INOUYE. In balancing the needs of the military, does that also include reduction of the force structure?

General SHINSEKI. It is not a consideration on my plate. I have testified, I believe both before this committee and others, that today for the profile of missions the Army is asked to perform, we are not big enough to handle that mission profile without a significant operational tempo (OPTEMPO) impact on our people. And you see the impacts of that, great youngsters who go out there and do not mind doing the heavy lifting, but then show the effects of that significant OPTEMPO.

Some of our ways of mitigating it are we have passed some of those operational missions to our Reserve component who do some of those missions very, very well. In Bosnia today, over 2,000 of the soldiers on the ground handling the Bosnia mission are out of our Reserve component. In Kosovo, over 700 of our soldiers on the ground there are out of the Reserve component. So, we mitigate some of that tempo that is caused by an active component force that is smaller than the mission profiles we are asked to perform, and then the resourcing of that force has been less than we would like.

There is a finite amount of going to the Reserve component to mitigate that OPTEMPO that we can account for. Beyond a certain point, these great citizen soldiers do have other careers that are full-time for them, and so going to them too often creates a burden on them as well. It is a very delicate act of balancing that the Secretary and I do in this regard.

Senator INOUYE. I have many other questions, but Senator Stevens has another engagement.

Senator STEVENS. Well, thank you very much, Mr. Chairman. I just have a couple of questions.

FAMILY HOUSING

Secretary White, when the Secretary of Defense was here earlier, he indicated that he believed that we should set a goal to eliminate all inadequate family housing and inadequate barracks for single people by 2010. When Admiral Blair, the Commander in Chief of the Pacific, was here, he outlined for us the substantial backlog and really inadequacy in housing and military facilities in Alaska. That is very worrisome to me because unless there is substantial military construction monies allocated to Alaska in this period of time between now—it is only 8 years in the bill we are looking at now—the basic facilities for the military in Alaska will be left behind again.

As a matter of fact, the Senator and I share part of our "pork" titles because we constantly have to add to the budgets prepared

by the Department of Defense and the administrations, whether they are Republican or Democrat, monies to ensure the quality of life for the military people that are assigned to our State.

Is this part of the program that you are working on with the Secretary? I am not asking you to comment on it, but is it? Are we going to get, as part of this plan, some indication of how the Department of Defense can catch up in this critical area? Operations and maintenance is critical in and of itself. But I believe the impact on families has a lot to do with the drop-off in reenlistment rates. Unless we get these facilities really modernized and do it in the near term, we are going to start losing more and more people who have families and are going to be assigned either to Hawaii or Alaska.

What can we do about this backlog?

Secretary WHITE. Senator, number one, I absolutely agree with you on the importance of this. My wife and I raised a family in military housing and on military installations, so I have a personal appreciation for this.

It has been a central topic of discussion in our budget deliberations with the Secretary and his staff, as we have looked at fiscal year 2002 and going forward. We are committed. I think without prejudging the outcome of where the fiscal year 2002 budget comes out to rectifying this, I think it is a perfect example of a public/private partnership where we can accelerate this process by bringing in private developers, as we have at Fort Carson, so that we stick to the commitment of getting this fixed by 2010. I know that the Secretary shares our concern, as do all the services. So, we are putting an emphasis on this.

Senator STEVENS. We have supported privatization of the offshore States, but privatization will not do it all in areas where it is not economically feasible to achieve housing of the types needed for our military families in the short term. I would hope that we can find some way to deal with this.

There are Fortress America type people in the military who believe that the two offshore States are overseas. As a matter of fact, some of your people still refer to assignments in Alaska and Hawaii as being overseas. That reflects into their judgments as to how they allocate money for even things like housing. If they continue in that, then our bases will be those readily available for base closures because they are inadequate. I think the Century of the Pacific calls for an increased emphasis on forward deployed forces in Alaska and Hawaii.

There are two critical elements as far as I am concerned. One is the backlog in maintenance per se in the bases, but the other one is in the backlog in modernization of the facilities for the families. That includes not just housing but also the basic facilities for family life on bases.

I would urge you to take a look at it because I have got to tell you, on my watch I am not going to see bases closed in Alaska because we failed to get the proper housing for people or proper facilities so their families can enjoy life in our two States. I am serving notice. I am going to try to amend the budget to make sure that housing has the priority it must have in this critical time of maintaining the forces on a volunteer basis.

Secretary WHITE. Senator, I agree entirely with that priority. I think it is critical to us, as you touched upon. We may recruit soldiers, but we retain families. This is a central issue to support them, and it is receiving, from the Chief of Staff and me and from the Secretary of Defense, top consideration, and we will continue to do so.

Senator STEVENS. Thank you very much, Senator.

Senator INOUYE. For the record, I will be supporting the Stevens amendment.

Senator STEVENS. I will be supporting the Inouye amendment. It will go further now.

Senator INOUYE. Senator Bond.

Senator BOND. Mr. Chairman, thank you very much. Let me note for the record that I am totally on board with it because I think that Alaska and Hawaii deserve the utmost consideration.

Just count me as a very strong supporter of that.

Senator INOUYE. You got your project.

Senator BOND. I have to go join Chairman Mikulski in opening another hearing. I wanted to extend a welcome to Secretary White. We had a good visit yesterday. We talked about our interest in readiness, and I asked some questions about the Army aviation modernization plan and some problems we had there. I just wanted to ask one question, if I could.

ARMY NATIONAL GUARD ROLE IN TRANSFORMATION

In light of the Transformation and making the Army a more strategically responsive, full-spectrum force, I would be interested in the role you envision for the Army National Guard in the Transformation. Do you think their role will take on new dimensions, be reduced, or remain relatively unchanged?

Secretary WHITE. Senator, first of all, I appreciated very much our visit yesterday.

I view, as does the Chief of Staff, both the Guard and Reserve as critical components to one Army. As the Chief stated a few minutes ago, they are actively involved in missions today that 10 or 15 years ago they probably would not have been undertaking, the 49th Armored Division in Bosnia, the 29th Infantry Division about to depart.

General Shultz is behind us. We will promote him to 3-star this afternoon, as General Plewes on the Reserve side will also be promoted.

I think, as we transform the Army, the Guard and Reserve will continue to represent critical components to our capability and they will receive the priority that is consistent with that importance.

Senator BOND. Thank you, Mr. Secretary. Thank you, Mr. Chairman.

Senator INOUYE. Thank you.

DEPLOYMENT DURATION

General Shinseki, in response to my last question, you mentioned the Balkans and the use of Reserve forces. If my mailbag is any indication of concern, I believe most of my mail referring to the Army would touch upon the Balkans. My question is from your background and experience, can you give us any appraisal as to

how much longer our troops will have to be deployed in Kosovo and Bosnia? I know it is not a fair question, but I need some response.

General SHINSEKI. Well, Mr. Chairman, this is really a policy question. Recall we went there in 1995 at the signature of the Dayton Peace Accords initially for a year, which was extended to 18 months and then subsequently extended to now with an open time frame based on setting conditions for our resolving our mission there and coming home. I do not have a good time line.

But I will tell you that Bosnia and Kosovo are better places today because of our presence primarily. Our soldiers who go there encounter some turbulence because when you are in a location for 5 years, there is constant turnover of having troops there. We mitigate that turbulence by using Reserve component formations who have been marvelous in performing that mission. But we also mitigate some of that impact by limiting the length of the rotation to about 179 days. But the mission performed there by our soldiers is magnificent.

When I am there to speak to them, they feel they are doing a meaningful job. They are doing it well. They do make a difference. They do provide a living model of what a democratic Army inside a civilian controlled enterprise, government, ought to look like, sound like, act like. I think there are some additional benefits that come from our presence. So, there is good work being done there and our soldiers feel job satisfaction from performing those missions.

But as to the timeline to meet the conditions for resolving that crisis, I do not have a good answer for you.

Senator INOUYE. I have been told that the morale among the troops in the Balkans is a bit higher than the morale in Continental United States (CONUS). Is that correct?

General SHINSEKI. Well, I would not make any comparisons because today the Army is reenlisting at above our targets. We are reenlisting right now at about 105 percent. In past years we have been as high as 109 percent, but the highest of our reenlistment rates comes out of soldiers who are either on operation of deployment in the Balkans or have recently returned. That sense of job satisfaction has a pretty significant impact on their decisions about whether they want to stay with the force or find something else to do.

Senator INOUYE. I have many other questions, but I would like to recognize Senator Cochran.

Senator COCHRAN. Mr. Chairman, thank you very much. I am pleased to be here today to welcome the Secretary and congratulate you on your new position as Secretary of the Army.

Secretary WHITE. Thank you, sir.

Senator COCHRAN. General Shinseki, it is a pleasure to see you again.

General SHINSEKI. Good to see you again, sir.

RESERVE COMPONENT PERFORMANCE

Senator COCHRAN. I was fortunate to be able to go down to Camp Shelby, Mississippi recently, and I thank the National Guard troops who were assembling there for training in preparation for their assignment in Bosnia. About 500 Mississippians are under-

going this training in preparation for a 6-month deployment as peacekeepers in that theater. I can assure you they seemed to be excited about the opportunity to go on this mission, and I am curious to know your reaction to whether or not you think it is still a good idea to have National Guard forces, Reserve forces deployed in this theater and what their performance has been to date, and if we have the funds in the training programs that will help ensure that they are trained and can capably handle the mission and come back safe and sound.

Secretary WHITE. Senator, as General Shinseki just said, we have had several deployments of National Guard forces into Bosnia, the 49th Armored Division and the 29th Infantry Division is about to go with the Mississippi contingent. I view the deployment of Guard forces side by side with active forces in Bosnia and other places as to be the true test of one Army, that in fact we have one Army. If we are smart about how we organize the missions for the Guard in terms of the lead time and the training and all the other pieces that go along with it, that they can be extremely effective and that they're excited about that mission and that we should continue to do it.

I think it shows how far we have come in integrating the active component with the Reserve component that we are able to do this. I think your sensing of it from visiting the soldiers who will deploy is what I have gotten from talking with the 49th Armored Division soldiers and others, which is, this is a great mission so long as we structure it properly, and we are going to continue to do it.

Senator COCHRAN. General, do you have any other comments?

General SHINSEKI. I would love to add to that, Senator Cochran. In our profession, in this ground force profession, so much of our effectiveness in any of our missions, but if you were to take the most intense of our missions, warfighting, a key factor here is cohesion of units and the small unit leadership where non-commissioned officers and junior leaders are comfortable in their responsibilities.

In a mission like Bosnia, a 6-month tour there does wonders in developing that small unit leadership, that if you were to put the same unit in a peacetime training scenario back here in the Continental United States, an active unit or even more explicitly a Reserve component unit, just the time to be together to learn how to go through their processes and their procedures and to learn the art of leadership, 6 months in Bosnia is an excellent leader development opportunity for non-commissioned officers and junior officers. Our components are going to be well served in future years as they grow up in the profession for whatever crisis comes along.

Secretary WHITE. Let me just say one other thing, Senator, if you do not mind. The 29th Infantry Division is the division that is about to deploy. Last week we celebrated the dedication of the D-Day Memorial in Bedford, Virginia, the home territory of the 29th. They, of course, were a lead division at Omaha Beach in 1944. A lot of their veterans that were present at that ceremony came up to me and said it was great that the 29th had a mission side by side with the actives like they had on D-Day. So, it is a big deal for us.

NATIONAL TRAINING CENTER

Senator COCHRAN. I recall the last mobilization of Mississippi National Guard units in numbers like this occurred in Desert Storm. I recall going out to the National Training Center in California at Fort Irwin to thank the troops who were out there doing what they needed to do to be prepared for deployment to that theater.

I was very impressed with the National Training Center, and I am curious to know whether or not you still think that is a valuable resource for training. Is it being used? Are the funds in the budget request that will be submitted sufficient to keep it operating in a way that you think it is helpful to the Army?

General SHINSEKI. I would just comment that the National Training Centers (NTC) are, for the Army, what makes our Army different from all the others and put us at the head of the line. It is where we go into full contact, force on force, both sides trying to have the better day with a professional opposing force that may be the best trained regiment in the world out at the NTC or down in Fort Polk. It is a centerpiece of our training programs. We do need to put money in there to modernize them, as we modernize the rest of the force, because when we go out there to train, our ability to get accurate data on resolution of how those mock battles play out are very much dependent on our ability to collect information.

You remarked the last time that the 155th Armored Brigade stood up was in Desert Storm. The 155th stood up one other time, Senator. In 1999, shortly after I became the Chief, we mobilized them for an exercise and sent them to the National Training Center. In July 1999, I had the opportunity to be out there with General Shultz, and we watched the 155th Mississippi go through its paces, much as you did. I will tell you that the difference in their capabilities is significant. I am mighty proud of that National Guard Brigade. It used to be my counterpart Brigade when I commanded the 1st Cavalry Division.

Secretary WHITE. Senator, let me make one other comment, and that is I view the National Training Centers as critical to support Transformation because as opposed to the transformation of the Army after Vietnam, what the NTC and our other training centers give us is the opportunity for high fidelity experimentation and testing. As we bring the Interim Brigades in, as we start to get new ideas coming out of the tech base, it gives us a high fidelity test platform in those training centers to try out new ideas as we shape the Objective Force. So, not only for current readiness and training, as the Chief talked about, but supporting Transformation will be a vital activity to go on at the NTC.

155 MM LIGHT-WEIGHT HOWITZER

Senator COCHRAN. There is a new howitzer that I am advised about, a 155 millimeter howitzer, lightweight, and the plans are to develop, produce, and then test this at Camp Shelby, Mississippi. I am curious to know whatever information you can give me about that program. Can you tell us how it compares to your existing leg-

acy system in terms of survivability and mobility, and does it support your Transformation requirements as well?

General SHINSEKI. I would like to provide a more complete answer for the record, Senator, about the programmatics that go along with the lightweight 155 system. But it is one that we focused on to provide for our interim capability that we are standing up with brigades out at Fort Lewis, Washington, an artillery capability that we currently lack. It went through a competition and it was the system chosen. I am comfortable then that it is the right answer.

In terms of how it is performing, I would probably have to give you a better answer. But I think it meets our requirements for the Interim Force, and I think the Marines are also interested in it.

[The information follows:]

155 MILLIMETER LIGHTWEIGHT HOWITZER

The Joint Lightweight 155 millimeter Towed Howitzer will replace all howitzers in the Marine Corps and most of the M198 howitzers in the Army. The Lightweight 155 is an integral part of the Army's Transformation, as it will be fielded to our Interim Brigade Combat Teams and light forces.

The Lightweight 155 program is a joint development with the Marine Corps. The program management office is jointly manned and supervised by both Services. The Marine Corps funds development of the basic, optical fire control howitzer and leads in production. The Army funds the development and integration of digital fire control for the howitzer and follows in procurement. The Marine Corps plans to procure and field 413 Lightweight 155 howitzers between fiscal year 2003 and fiscal year 2007. The Army plans to procure and field 273 Lightweight 155 howitzers between fiscal year 2004 and fiscal year 2009. Additionally, the Lightweight 155 is an international cooperative program with the governments of Italy and the United Kingdom. Each of these countries indicates they will procure from 60 to 70 Lightweight 155 howitzers.

The prime contractor for development of the howitzer is BAE Systems of the United Kingdom. The BAE Systems formed a team to produce about 80 percent of the Lightweight 155 in the United States. The current plan is for a member of the team, United Defense, Limited Partnership, to perform the final assembly and testing of the howitzer in Mississippi.

The Lightweight 155 is a substantial improvement in mobility, survivability, and combat effectiveness over the current M198 howitzer. At 9,000 pounds, the Lightweight 155 is 42 percent lighter than the M198. The reduced weight and innovative design increase cross-country mobility by 23 percent and reduce the time to occupy and displace by 74 percent. The digital fire control improves accuracy and allows the howitzer to adopt shoot-and-scoot tactics similar to those of the Paladin self-propelled howitzer. The net result is that survivability improves by 70 percent which, when combined with the increase in mobility, significantly improves the combat effectiveness of the fire support for our Interim Brigade Combat Teams and light forces.

Senator COCHRAN. Thank you.

Mr. Chairman, I have some other specific questions about other systems that we have an interest in in our State, and I will be glad to submit those for the record.

Senator INOUYE. Without objection, they will be submitted.

Senator Dorgan.

Senator DORGAN. Mr. Chairman, thank you very much.

Mr. Secretary, congratulations.

Secretary WHITE. Thank you, sir.

Senator DORGAN. You and I have not had the opportunity to spend time to visit, but I hope we can do that at some point.

General, thank you for appearing again.

DEPLOYED TROOP MORALE, TRAINING, AND READINESS

Let me ask a question that follows on something that Senator Cochran or Senator Inouye may have asked about, and that is troop morale and training and readiness and so on. Senator Daschle and myself and some others were in Skopje, Macedonia, and we were going to go up into Kosovo and the weather would not allow that. But we met a number of the troops and General Ralston was there. One of the points he made to us was interesting. It was interesting to me because there is this discussion going on that these kinds of operations really are not good for morale, number one, and number two, take away from training and readiness.

General Ralston made the point that he felt that it was excellent training. He said nowhere in the Army are officers and soldiers on the ground having real-time activities and decision making opportunities like that. He said, frankly, it does not injure readiness or training. In fact, he said it is a contributor to good training.

Can you respond to that?

General SHINSEKI. Sure. Senator, I would echo General Ralston's observation. As I remarked earlier, so much of our profession is really tied to training and leadership, leader development. We have few opportunities to take a good unit and put them in an operational scenario where they have to learn how to work together and, not in a totally benign environment, have to deal with some pressures out there where they have to go out on a patrol and young leaders take over. They do not have the opportunity to have a colonel or a senior officer standing over and helping give advice.

Every day in Bosnia, when I commanded there, something on the order of 180 U.S. patrols would go out, executed for the most part by non-commissioned officers, in some cases by junior officers. They would mission brief. They would go out, execute the control. Whatever happened out there they handled and then came back and mission debriefed. I would suggest to you that the fact that you did not see a lot of coverage of those 180 patrols going out tells you that they did those missions quite well.

In the process, they grew in their leadership skills. They created cohesive units that knew each other better, trusted one another, and this is a lot of what our profession is about. Yes, the tools are important. The tools will always be important, but they do not substitute for good, cohesive units that have strong leaders, and that is the training piece that comes out of General Ralston's explanation.

There are some down sides. You miss the opportunity to fire your big weapons systems and maneuver them, but we compensate for that by getting all that work done before they deploy. They are gone for 6 months. As soon as they come back, we get back on that training schedule so that within about 6 to 9 months, they are back in top notch readiness and we accommodate that.

Senator DORGAN. General, thank you very much.

BASE CLOSURE

Secretary White, I want to say on the issue of a base closing commission you have been on record publicly saying you would support one round or an additional round. I wondered do you understand—

you perhaps do—why there is some push-back on base closing commissions?

Secretary WHITE. Certainly.

Senator DORGAN. When we go into a commission, if we do not have some notion of targeting where the excess capacity is before you go in, every single military installation in America essentially has a bull's-eye on the gate that says this might be closed. In those communities, those smaller communities especially, 30,000, 50,000, 80,000 people, there is nobody going to invest in those communities until that is resolved. They are not going to go build a 12-plex apartment unit or move a new business in because base closing commissions may close this base, and therefore you'll have double digit unemployment in that region. It puts at risk a whole series of installations that are probably never going to be closed and never even on the cusp, but you dry up the economies.

It seems to me if there is a base closing commission—I am not certain there will be another one at this point. I am not certain that the Senate would support it, but if there is a base closing commission, would it not be better to have some basic targeting of where the over-capacity is and have a commission that focuses only on that?

Secretary WHITE. Absolutely, Senator. I think the cart is a little bit before the horse.

The first thing we have to nail down is what the national military strategy is, and of course, in the Quadrennial Defense Review (QDR) process we are about and the Secretary of Defense is about figuring out what that is. That is step one.

Step two is sizing the force against the strategy and that will also flow out of the exercise that is currently ongoing.

And then the third step will be what is the most efficient basing for that force, and only at that stage of the game, when we try to figure out the most efficient way to base the force and to support it from a business perspective, will we get into the business of which infrastructure is excess or not.

This has got to be a strategy-driven exercise, and that is the way the Secretary of Defense has set it up.

Senator DORGAN. Let me mention one other issue, and that is dealing with trailers that the Army purchases.

I think the Army is a great organization. I have deep admiration for it. I have spent a little more time working with the Air Force because we have two large Air Force installations in my State. But we have an Army National Guard, which I am very proud of, and I will not ask questions about that except based on your previous answers, I understand you know the contribution they make and the significance of it.

ELIMINATION OF WASTE

I ran into an issue of some trailers here a while back, and it reminded me again how terribly bureaucratic things can be at the Pentagon, but probably all through Government. Someone produced for you about 5,500 trailers and the brake actuator hitch did not work, and so they have been warehoused now for I think 3–4 years sitting in warehouses. As I looked at that, I thought what a waste of money. How does this happen? As I tracked it through,

I realized we have entrenched bureaucracies that protect what they do and make it very difficult for new ideas to seep in.

Mr. Secretary, I was intrigued by the comments you made about "stupid" waste. I suppose by definition most waste is stupid, but perhaps some more stupid than others.

Secretary WHITE. Yes, sir.

Senator DORGAN. But I like the attitude that much of what we do is very important, but bureaucracies can also produce a kind of a byzantine result from time to time. To the extent that you can look into that and tackle that, I think you will have the support of members of this subcommittee. We want the investment in defense to be an investment in muscle and strength and security, not in waste. So, I appreciate that attitude that you bring to this job.

I just want to tell you the only recent example I have seen is a little example about trailers, and I will talk to you about that some other time.

Secretary WHITE. But it is a great example, and I think it would qualify as stupid.

Senator DORGAN. That is what I said.

Secretary WHITE. Right. Yes, sir.

Senator DORGAN. But anyway, thank you all for being here. I look forward to working with you. Let me just say, as I conclude, I think the National Guard which you have referenced, while it is not a substitute for active forces, we need active duty forces and we need them well equipped and well armed with modern weapons and supported well. We also need the National Guard, and we get a terrific bang for the buck, as they say with this National Guard. The men and women who are citizen soldiers in our State and, as Senator Cochran said, Mississippi and every other State in the country are a terrific complement to what you do. I appreciate your support for them as well.

Mr. Chairman, thank you very much.

Senator INOUYE. Senator Shelby.

Senator SHELBY. Thank you, Mr. Chairman. I apologize for missing part of this, but I was in another appropriations subcommittee meeting.

ARMY AVIATION

General, I have talked with you at some length about the Army's Transformation. And this may have been asked and I apologize if it has because I was not here. I am pleased to see in your testimony that you and Secretary White mentioned the important role that the Army aviation, specifically the Comanche, will play in the Transformation effort. You talk about its role with the Transformation effort and its operational capabilities, but could you for a minute also talk about the current status of the program and discuss the facilities and training components being developed with the Comanche?

General SHINSEKI. For the Comanche?

Senator SHELBY. Yes.

General SHINSEKI. Well, we are still a few years out from fielding the Comanche, as you know, Senator, 2008. So, some of the specifics of those decisions are——

Senator SHELBY. But we have to start planning and building whatever we need.

General SHINSEKI. Absolutely.

Senator SHELBY. I have talked to Secretary White about this.

General SHINSEKI. And the fielding plan will dictate where we go first. But in the case of the Comanche, not only is it a far more capable aviation platform and, therefore, its reach is significant, it is also a very capable weapons platform. In terms of training ranges that we need to develop that will allow it to train safely, considerable work is underway to figure out whether or not our current ranges can accommodate them. Where can we shoot the Comanche with all of its capabilities so you can train to its maximum potential? A pretty significant question, and that is part of why we are in the process of trying to decide whether our home stations are adequate for training these new systems with greater capabilities or whether we have to go some other special place to do something like this, maybe out to the National Training Center where today we primarily put ground forces and not a lot of aviation units or some other place. But these are the kinds of issues for long-term decisions that we are wrestling with in order to make sure that when the Comanche arrives, those questions——

Senator SHELBY. That we will be ready.

General SHINSEKI. Yes, we are ready.

COMANCHE SOFTWARE SUPPORT

Senator SHELBY. General, the Comanche platform contains several million lines of software code in its operating system. As the premier software development and support facility and the only Government center to achieve a level 4 rating by the Software Engineering Institute, the United States Army Aviation and Missile Command (AMCOM) Software Engineering Directorate (SED) could achieve significant software life cycle support cost savings for the Comanche, as well as other systems with similarly complex software operating systems. In other words, the future.

Has the Army considered—and if you have not, will you—assigning the Comanche software life cycle support to a Government facility like the SED facility at AMCOM in order to determine cost savings which might be derived from their support capabilities, as well as the potential to leverage aviation research and development? If you have not, will you?

General SHINSEKI. We are certainly going to look at it. I did not have all those qualifiers for AMCOM, but if they are the most capable center, certainly. We would go where the capability is. Frankly, I do not know the answer to your question, but I will get you one for the record.

Senator SHELBY. Talk with me about it.

General SHINSEKI. Yes, sir.

[The information follows:]

COMANCHE SOFTWARE SUPPORT

U.S. Army Aviation and Missile Command (AMCOM) Software Engineering Directorate (SED) personnel are currently working within the Comanche office. The Comanche Program Manager's office (PMO) is very familiar with the excellent capabilities and expertise of the AMCOM SED. The Comanche program currently plans for the Boeing Sikorsky team to maintain software for three years after initial field-

ing, under management control of the PMO and SED. This will be followed by a gradual transition to the SED. At the end state, we anticipate that the AMCOM SED will maintain the majority of all Comanche software.

Senator SHELBY. General, would you discuss briefly the importance—if you have, I will get it from the record—of the compact kinetic energy missile technology as it relates to the future combat systems and the importance of increasing science and technology funding for basic scientific research at the Army Aviation Missile Command?

General SHINSEKI. Yes, we are interested.

Senator SHELBY. I know I am asking you some complex questions. You might want to expand on it for the record.

General SHINSEKI. I will expand on it for the record. But, Senator, I would say, yes, we are interested in it. A larger version of that vehicle has proved out to have significant capabilities. We are interested in a smaller package and this is what we are interested in. We do have a program identified to pursue the future technology here.

UNEXPLODED ORDNANCE

Senator SHELBY. Lastly I want to get into unexploded ordnance. Has it been talked about today?

General SHINSEKI. It has not.

Senator SHELBY. Secretary White, more than 700 formerly used defense sites and 1,000 of current military training ranges contain conventional unexploded ordnance—we all know the history of it—that pose a potential hazard. Contained detonation chambers, such as the Donovan chamber, have been built by the Army to safely destroy this unexploded ordnance.

What is your position, Mr. Secretary, on open burn, open detonation methods to destroy conventional unexploded ordnance?

Secretary WHITE. Senator, I am not familiar with the specifics of the issue. I will have to get back to you.

Senator SHELBY. Will you get back with me?

Secretary WHITE. I will do that.

Senator SHELBY. For the record.

Secretary WHITE. Certainly.

[The information follows:]

UNEXPLODED ORDNANCE

The Army position is that open detonation is a safe and environmentally sound method for destroying conventional unexploded ordnance (UXO). Unexploded ordnance are used military munitions that have been through all or a portion of their firing sequence and are, therefore, assumed to be armed. For this reason, the Department of Defense (DOD) has adopted an open detonation policy for UXO, particularly when located in areas like operational ranges or formerly used defense sites, in which they do not present an immediate and certain risk to the public, to include DOD personnel, or critical assets. In such situations, open detonation exposes personnel, normally DOD personnel who are trained and experienced in explosive ordnance detonation, to the least risk of an unintended detonation. Open detonation also allows the immediate elimination of an explosives hazard.

The Army, through initiatives underway at the Center of Excellence and Demilitarization, Huntsville Engineering Support Center, and other organizations is searching for alternate, safe technologies for the elimination of UXO. These efforts include the development of improved detection technology, use of robotics, and investigation of alternatives to open detonation. The Donovan chamber is but one example of a technology that might be used as an alternative to open detonation of some munitions. Use of alternative destruction technologies is usually premised on

the assumption that unexploded ordnance are safe to move. This often is not the case because of the inherent explosive hazards of moving unexploded ordnance.

Alternative technologies also have limitations. For example, the Donovan chamber has specific limitations on munitions configuration, size, and net explosive weight. Large munitions or those with net explosive weight above 6.5 pounds cannot be detonated in the transportable Donovan chamber.

Open burning and open detonation are essential methods of destroying conventional UXO. Contained detonation technology is being developed as a piece of the overall UXO elimination toolbox. However, personnel safety and technology limitations prevent it from being the solution to all UXO elimination.

In the case of DOD's industrial demilitarization program for excess and obsolete munitions, the Army has made a concerted effort to reduce its reliance on open burning/open detonation (OB/OD). Over the past decade, the Army has significantly reduced its reliance (from almost complete reliance to less than 40 percent reliance) on OB/OD in its industrial munitions demilitarization operations and has focused on reuse, resource recovery, and recycling. However, the Army must continue to rely on OB/OD for unstable, excess, and obsolete munitions for which no safe alternative technologies currently exist, while ensuring minimal environmental and public health impact. The Army performs OB/OD in compliance with environmental regulations and permits.

Some of the actions that the Army takes to optimize and monitor the use of OB/OD as a means of industrial-scale munitions demilitarization include adherence to stringent standing operating procedures that outline the weather and other conditions under which OB/OD is prohibited; installing air quality and noise monitors to record the impact of OB/OD on the surrounding communities; environmental sampling as a part of the health risk or public health assessments performed by the Army and/or the Agency for Toxic Substances Disease Registry; close cooperation with the local, state, and federal regulatory agencies; and out-reach programs.

With regard to industrial demilitarization, the Army currently is conducting a study of a number of alternative demilitarization technologies as directed by the Congress. These include contained detonation, supercritical water oxidation, biodegradation, incineration, and others. The House Report 106–754 requires DOD to report back to the Congress by September 30, 2001, on the possibility of phasing out OB/OD in favor of alternative technologies. We will provide a report to Congress on our findings.

Senator SHELBY. And what technology you all will support here. I know this is a problem not just in some of my State, but I guess everywhere we have had training.

Mr. Chairman, I have some other questions, but I will submit them for the record. And I thank you.

Senator INOUYE. Without objection.

CRUSADER

General and Secretary, I would like to ask my final question. The Crusader field artillery system has come under significant scrutiny, and some of the critics have even suggested its elimination. I would like to hear your appraisal and your reasons for continuing the program.

General SHINSEKI. Let me just say for the Crusader program, the requirement is valid. The challenge of the Crusader is it was designed heavier than it should have been. But the Crusader in all of its other aspects satisfies the requirement that we have had since the Cold War ended.

As we set ourselves up to fight successfully during the Cold War in Europe, we anticipated fighting essentially a defensive battle in which the other side would attack, and as they continued to come after us, would fall under our arc of fires. So, we designed artillery systems to take advantage of that. They did not have to be very fleet. They did not necessarily have to have long reach because de-

fending against an attacking force, they generally come into your arc of fires.

The Cold War ended in November of 1989, and literally a year later we were off to Desert Storm. Not much time to gather ourselves from 40 years of looking at our warfighting responsibilities one way and, in less than a year, presented with a new mission requirement. Desert Storm required us to go on the offense, and when you go on the offense, your artillery guns have to keep up with your tanks. If they do not, your tanks stop until they can catch up so that you can get that arc of protective fire.

Then you find out that the artillery range on your guns are outmatched by the other side. In fact, the other side has more guns and they can fire more accurately.

We understood that in 1991 we had to do something about this, and so the Army took 25 percent of its artillery out of the force, took the risk of doing without 25 percent of its needed artillery, not very good, but needed artillery, and went after some technology that would correct those shortcomings, technologies like longer range, technology like higher volume of fire, 10 rounds in a minute, where our standard artillery pieces probably shoot 1 round a minute. So, what that means is with a single artillery platform, you can now mass fire in a way that you needed 8 or 9 or 10 guns to get the same kind of volume, an artillery piece that is more accurate. So range, rate of fire, and mass, more accurate, and a vehicle that could now keep up with your tanks and your infantry fighting vehicles. So, you did not have this break in warfighting momentum.

We even went so far as to take 25 percent of our tanks and our infantry fighting systems out of our warfighting battalion formations. So, we went from tank battalions with 58 tanks to tank battalions with 44 tanks; infantry battalions with 58 Bradleys to 44. Twenty-five percent degradation, accepting risk because there was not a war on the horizon, betting on the outcome that our systems would provide us an artillery piece that would compensate for taking that risk.

Well, that artillery system ended up being Crusader. I think the problem with Crusader is it ended up being bigger than it probably should have been. We have taken significant steps to reduce it from the 55-ton artillery piece to about 40 tons, and we constantly look for ways to make it even lighter.

We have taken the risk, and if we decide that we do not need the Crusader, we will go for the next 10 to 15 years until we find in the objective force a fix or a back-fill for that capability that will extend our risk window far more significantly in the future. That is why I say the requirement for the Crusader is a valid requirement, and I have testified to that.

Secretary WHITE. Let me add to that, Mr. Chairman, in that we in the United States Army have had a long and time honored tradition of being outgunned by our potential adversaries, particularly in regard to anyone equipped with Soviet equipment. As a former maneuver commander in Europe, that was always, as General Shinseki talked about, our principal concern.

We never fixed it during the big five transformation of the 1980's. We retained the 109A–2, which was the companion artillery

piece of the M60 tank. We have now product improved it up through Paladin, and that is about as far as you can stretch that rubber band.

The Crusader comes in to fill the gap that we have already paid the bill for and is a carrier for technologies that we will very much want in the Objective Force, i.e., robotics and digitization. So, from both a Transformation perspective and a current readiness challenge, capabilities challenge with the existing force, Crusader appears to be the answer, if it does what it is billed to do.

Now, having said that, we have a Quadrennial Defense Review. A National Military Strategy will flow from that review. Against that strategy, all of the major programs of the Department, not just Crusader but the fighter programs and so forth, will have to be balanced against that. So, we will argue that case as a part of whatever role land power plays in this new strategy. It is just that we have to make that case, but from where I sit right now, Crusader is an answer to a longstanding problem with the Army that we have not fixed in previous years.

Senator INOUYE. If I may ask a further question. You spoke of the range of the Soviets. What is the comparable range between the anticipated Crusader range versus the Soviet range?

Secretary WHITE. I think Crusader, Mr. Chairman, against comparable sized artillery will outgun what we expect to see on the Russian side. We can, with extended projectiles, get out to 40 kilometers roughly, which is more than double the range of the 109A–2 and should give us a range advantage so that we can take full advantage of the family of precision guided munitions that we expect to field that would significantly improve this footprint of indirect fire coverage to support the maneuver force. That footprint will be very consistent with the enhanced maneuver capability we expect to build in the Objective Force.

Senator INOUYE. What is the range of the Soviet gun?

General SHINSEKI. They have a range of artillery pieces, so there are different ranges that are provided by different categories of artillery. But the Crusader would range the best of what they have now.

There are rockets that would exceed the range of artillery pieces. Let me qualify that, Senator. There are some artillery pieces that would challenge the range of the Crusader. There are some that exceed it.

But, again, what the Crusader gives you is a volume of fire that is 9 or 10 times the rate of fire of our current systems so that you make up a considerable difference here with the rate of fire that the Crusader provides.

Plus, I would echo a good point that the Secretary provides. It is a technology carrier for future systems and what that might open up in terms of increasing, improving range and advantaging ourselves of this technology.

Senator INOUYE. Senator Cochran.

Senator COCHRAN. Mr. Chairman, thank you.

THEATER HIGH ALTITUDE AREA DEFENSE (THAAD) PROGRAM ACCELERATION

Mr. Secretary, in the joint statement which you supplied the committee with General Shinseki, under the title Legacy Force Modernization and Recapitalization, there is a statement as follows: "Fielding the Patriot Advanced Capability-3 missile defense upgrade and the Theater High Altitude Area Defense system will significantly increase our in-theater force protection."

I know that when we saw the original schedule for the THAAD program, it was to be in the field in 2002, but because of program delays and an exhaustive testing program, which has proved to be very encouraging, that target date for putting THAAD in the field is now 2007. We understand from some of the program officials that if we had more funding in the program, we could move that date up, perhaps as much as a year or 2.

Do you support adding funds to the budget to reduce the delay in bringing the Theater High Altitude Area Defense system to the field?

Secretary WHITE. Senator, I will have to defer either to the Chief of Staff or get back to you for the record for that. I have not examined that issue in great detail at this point.

General SHINSEKI. I would like to provide an answer for the record as well, Senator. I am always surprised when we say we want to accelerate, and when I get into it, you cannot do it and it is not a question of money. Sometimes it is a question of other technology that has to be achieved. But I will get into THAAD.

I am a bit frustrated with all the promise that is there, both between PAC–3 and THAAD. We have taken the harder route on missile defense. As you know, there are two schools. One says you can fire a missile that, when it explodes, provides a blast fragmentation effect and it blows the other missile out of its trajectory so that you keep it from hitting its target. As a result of our Desert Storm experience with one of those episodes in which a Scud missile warhead was not neutralized, tumbled out of control, hit a warehouse, and killed a number of youngsters I believe from Pennsylvania, one of our fine Reserve component units, we decided that blast frag was not good enough for a ground force that would always be living under the effects of fallout.

So, we took the harder route and went the point kill approach, and that said we are going to hit a speeding bullet with a speeding bullet and destroy it positively in order to assure ourselves that we would not suffer the same kind of consequence.

That approach has contributed to a tougher testing scenario and, in part, is maybe contributing to the timeline. But we have achieved through testing, demonstrating to ourselves and to others who were a bit skeptical about whether or not this was too hard to do, harder than hitting a major league fast ball, first of all, seeing that incoming missile traveling at thousands of kilometers per minute, and then hitting it at the exact point of intercept within millimeters of where we said we needed to hit the warhead in order to neutralize it up there in altitude. We have done that and done that several times now. We are comfortable that we can do this and demonstrated it.

Whether or not we can accelerate that capability back from 2007 or 2008 this way, I will have to get into it and provide you a better answer.

[The information follows:]

THEATER HIGH ALTITUDE AREA DEFENSE (THAAD) PROGRAM ACCELERATION

We have had several opportunities for program acceleration over the last two years because we were in the design phase of engineering and manufacturing development (EMD) when resources could be effectively applied to this program. Unfortunately, additional funding was not available during this period and program acceleration opportunities have diminished. We are now beginning the component fabrication phase of THAAD EMD hardware where disciplined, high-quality hardware assembly, software coding, and testing take a fairly standard time to accomplish.

Today, we have one viable low-risk acceleration option. THAAD first unit equipped (FUE) and early operational capability (EOC) could be accelerated one year. This would accelerate not only FUE and EOC, but also all testing and production so that all THAAD units are fielded a year earlier. We adopted this acceleration strategy because if FUE is accelerated, we assumed that the rest of the program would be accelerated following FUE.

THAAD schedule acceleration can be achieved by concurrently conducting missile design trades and tests and by compressing the test schedule by five months. Lead times for tests, analysis, and modifications will be somewhat reduced and lead time for test hardware will occur earlier. System critical design review (CDR) would be accelerated by six months.

To complete this acceleration option, the program requires an additional $191 million beginning in early in the first quarter of fiscal year 2002, and a total of $736 million through fiscal year 2007. Additional funding in fiscal year 2002 to fiscal year 2004 will provide additional test hardware for incremental design tests, pulling software builds forward, and additional up-front manpower. Additional funding in fiscal year 2005 to fiscal year 2007 will allow earlier procurement of production hardware, ultimately cutting a year off production.

These schedules allow earlier design decisions, long-lead time, and low cost, schedule, and technical risk while saving $379 million in acquisition cost through fiscal year 2012. The scope of work and technical content of the program will remain unchanged. The Army supports additional funding to the budget to accelerate fielding of THAAD as an effective upper-tier theater missile defense land-based system.

FUNDING CHALLENGES

Senator COCHRAN. One of the funding challenges is that in the Ballistic Missile Defense Office, they take the funds that we appropriate and actually develop the systems, but then when they are ready to be put in the field and managed, the funding goes through the individual services, like the THAAD program would.

Does this present a problem because it is competing with other priorities and other interests that the service has, and would it be more effective and would we get the systems developed and in the field earlier if the funding went through the Ballistic Missile Defense Organization (BMDO) rather than the service?

Secretary WHITE. Senator, that is probably a question better answered by the Secretary of Defense. I am sure with his publicly stated interest in ballistic missile defense, that that issue will get a thorough review.

Senator COCHRAN. Where generally are these missile programs in your order of priorities? Can you tell us anything about what your views are?

Secretary WHITE. It is a little early for me to form an opinion on that, Senator, but I will defer to the Chief on that question, if it is okay.

General SHINSEKI. Missile defense for tactical ballistic missile issues has always been a high priority for a force that is on the re-

ceiving end of these things. So, yes, in balance with lots of other things we are asked to do, Senator, theater missile defense is of high priority with us.

In fact, regarding your question about THAAD and PAC–3, much of that work is done inside of the Ballistic Missile Defense Office with an Army lead. So, we have been part of the real success story here in providing that kind of scientific insight, intellectual energy to go get it. We are mighty proud of the successes in those two programs, and the return will be protection of soldiers on the ground. So, it is a high priority with us, but there are other things we also pay attention to.

Senator COCHRAN. Well, I think you have every right to be very proud of your success in this area. It is commendable, and I congratulate you for it.

Senator INOUYE. Senator Shelby.

Senator SHELBY. I have no more questions.

ADDITIONAL COMMITTEE QUESTIONS

Senator INOUYE. Then, once again, Mr. Secretary, General Shinseki, thank you very much.

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

QUESTIONS SUBMITTED TO THOMAS E. WHITE

QUESTIONS SUBMITTED BY SENATOR TOM HARKIN

IOWA ARMY AMMUNITION PLANT

Question. The Iowa Army Ammunition Plant (IAAAP) presents some unusual issues because for many years an Atomic Energy Commission (AEC) nuclear weapons plant and an Army ammunition plant coexisted at the same facility. Recently the Department of Energy, as at other nuclear weapons facilities, has taken important steps to address the health concerns of former workers, including testing for chronic beryllium disease and a health study conducted by the University of Iowa that has highlighted a number of other exposures of concern. Yet those measures have only included the AEC side of the plant.

Workers on the Army side worked at the same plant, for the same contractor, and sometimes in the same buildings or areas. They were exposed to many of the same dangers, including beryllium, depleted uranium, and toxic explosives. And they were equally committed to our national security. In fact, the health study started with a card catalog of workers throughout the plant and has had a hard time separating out those who happened to work on the AEC side. I can't explain to my constituents why only some workers are included.

Secretary White, would you support similar health studies and testing for those who have worked on the Army side of the plant, so they can know whether their health has been harmed by their work at the plant?

Answer. The Army has been and remains committed to protecting the health of its workers. I would support epidemiological health studies and appropriate testing to determine if there is an association between the workplace and illnesses at IAAAP during the period in question. We will recommend that the Office of the Secretary of Defense consider a collaborative effort with the Department of Energy, where appropriate.

Question. Because of the joint facility, the Pentagon's secrecy policies have also discouraged workers from talking to officials about incidents and possible exposures at the plant, or even from talking with their own medical providers about their health concerns. Last year I was able to include in the Defense Authorization bill a provision requiring the Secretary of Defense to review the secrecy policies, to notify affected workers of how they can talk about these issues, and to report back to Congress by May 1st. Not only has the report not been delivered, but there seems to be an internal squabble over who is responsible for it.

Would you intervene at least to make sure that someone in the Army talks to the workers to help them talk about these issues without revealing any current national secrets? Do you see any danger to national security in saying where nuclear weapons were in the United States 30 years ago?

Answer. Nothing prevents the Army from discussing health issues as long as the presence of nuclear weapons is neither confirmed nor denied. There should be no impediment to any federal employee, service member, or contractor from discussing exposure to any materials with their health care professionals or other officials as long as they do not affirm or deny the presence of nuclear weapons at a specific location or specific time.

The locations of former nuclear weapon storage sites within the continental United States are unclassified, but the location and confirmation of nuclear weapons at current sites is classified. The neither confirm nor deny (NCND) policy is a national policy stating that the U.S. Government will not confirm or deny the presence of nuclear weapons at any specific site or location, independent of the classification. As long as the specific locations of nuclear weapons remain classified, we must continue to protect these locations through consistent and unyielding NCND responses. The NCND policy only protects current and future locations by being consistently applied 100 percent of the time to all locations, including former sites.

ROCK ISLAND ARSENAL

Question. I would like to turn now to the Army's arsenal organic base. The Army's arsenals, like some contractors, have suffered due to the reduction in forces over the past decade. Yet preserving the arsenals' unique capabilities is critical for current needs, for occasional emergencies, and for possible wartime requirements. I am very pleased that recent efforts by the Army Materiel Command to use the arsenals' capabilities have resulted in the first significant hire of workers at the Rock Island Arsenal in over a decade. These efforts preserve needed skills and capabilities at the arsenals and reduce excessive overhead costs for other work there.

Secretary White, will you encourage efforts to allow the arsenal to compete fairly for workload?

Answer. Yes. I agree that fair competition will play a critical role in the arsenal's future. Further, we will continue to use Rock Island Arsenal's experience and unique expertise during heavy gun development, especially producibility and manufacturing planning. Rock Island Arsenal has personnel with advanced metalworking skills who are on an equal footing with American industry when considering experience in working with titanium, lightweight, high-strength alloys, and composite materials.

HIGH MOBILITY TRAILERS AND WASTE

Question. Secretary White, you have been quoted as being eager to get rid of "stupid" waste. I have been fighting waste and abuse at the Pentagon for years, so I applaud your determination. Can you give any examples of steps you will take to eliminate waste or of waste you want to eliminate?

Answer. The Auditor General as a member of the Secretary's staff is responsible for identifying ways to improve Army mission capabilities and management practices and eliminate fraud, waste, and abuse. The Army Audit Agency, under the direction of The Auditor General, conducts over 500 audits and reviews annually that focus on improving the Army's operational effectiveness and management practices and eliminating waste. The Agency, on average, identifies over $1 billion in potential savings for the Army annually.

Some recent examples of these audits include: use of rail cars for transporting equipment to combat training centers; energy savings performance contracts; the Army lodging success program; the Army Morale, Welfare, and Recreation program, Europe; and equipping Interim Brigade Combat Teams.

In the installations area, we are looking at things like privatizing family housing and utilities when it makes sense to do so. These are areas which are non-core to the Army mission. We want to turn these functions over to private entities that can provide the services more efficiently than the Army. Another area is our leasing program, where I believe we can get out of high-cost leases and onto government installations with some up-front construction funding. We also need to take a look at the contracting of firefighters and security guards. Current law denies us the opportunity to contract these functions. However, we believe that we could provide the services in a more economical while ensuring the safety of our soldiers, their families, and civilians.

Other areas of consideration include, but are not limited to, improving the efficiency and effectiveness of transportation, financial management systems, working

capital revolving funds, video teleconferencing and telecommuting, system action review council data.

The continued evolution of The Army Plan and the concomitant Transformation Campaign Plan will ensure we eliminate waste by achieving unity of effort among force, resource, and modernization requirements and not squander scarce resources. The reengineering process continues to shift emphasis in Army planning from threat-based planning to capabilities-based planning and the establishment of performance standards that focus on the future and how much of that capability is needed. Capabilities-based planning is required to mitigate risks associated with the long-term challenges of Transformation and to hedge against mid-term strategic surprise. The end result is an Army document that selects, develops, and resources a portfolio of key military capabilities to prevail over current challenges, while transforming the effectiveness of the Army to meet the evolving, less certain security challenges of the future.

Question. One of the programs I have followed with great interest is the purchase of high mobility trailers for the high-mobility, multipurpose wheeled vehicles (HMMWV) humvees. The program office believes they have finally figured out how to fix these trailers, which sat unusable in warehouses for years. How many of these trailers are now in use in the field? How many humvees have been modified to pull them? Have there been any problems with the trailers that are in use? What are your plans for purchase of additional trailers that I understand are still needed?

Answer. Approximately 695 high-mobility trailers have received the fixes and are in the process of being fielded. For every high-mobility trailer that a unit receives, two HMMWVs are retrofitted with the cross-member upgrade kits. There are no reports of any problems with the modified system. The Army has an acquisition objective of 25,112 trailers. We will pursue a competitive procurement to meet this objective as we develop our program and prioritize our requirements. Future procurements will benefit from the improvements developed in the current fixes and be included in the technical data package for future buys.

QUESTIONS SUBMITTED BY SENATOR ARLEN SPECTER

GRIZZLY

Question. Secretary White, in fiscal year 2001 the President's budget terminated United Defense's Grizzly obstacle breaching system. However, the Appropriations Committee restored $15 million for the Grizzly program in the fiscal year 2001 defense appropriations bill through an amendment offered during the subcommittee markup.

Although the Army still has a requirement for a mine-clearing vehicle, the Army has not requested that this funding be released by the Office of the Secretary of Defense. Do you plan to request this funding?

Answer. No. The decision not to fund the Grizzly program was based on Army Transformation priorities and an assessment of affordability.

ARMY MUSEUM

Question. Secretary White, last year former Secretary of the Army Louis Caldera stated that the Army plans to build two new museums: one in Carlisle, Pennsylvania, and another in Washington, DC. He agreed that the Army would support a "first class" museum in Carlisle even though that site would not be "the official National Army Museum."

To that end, what active steps has the Army taken to provide assistance in planning and coordinating the project with the Military Heritage Foundation and others in Carlisle? Further, what are your plans with regard to the creation of a National Army Museum?

Answer. To facilitate rapid collection acquisition, the U.S. Army Center of Military History (CMH) granted the Army Heritage Museum (AHM) in Carlisle provisional museum status on September 29, 2000. CMH is continually reviewing the storyline and collection requirements of the AHM. To help with property accountability and planning, CMH conducted a staff visit and review of operations at the AHM with special emphasis on future needs. This provided a road map for future planning. To help with the automation of records management, CMH provided the universal site artifact management system (USAMS) for computerized inventory of historical artifacts in the collection. In addition, one member of the staff was invited to participate and successfully completed the combined USAMS/Basic Curatorial Course in February 2001. The CMH conservator has conducted an assessment of the existing collection to identify requirements and ensure the long-term protection of the collec-

tion. The CMH is currently preparing a statement of work to provide contract support for data entry into the USAMS.

The Chief of Military History briefed me regarding site selection for a National Army Museum in the National Capital Region (NCR). I have decided to have a museum of national scope in the NCR and am reviewing the alternatives. I plan to make a decision well in advance of the Congressionally directed report date of October 30, 2001.

QUESTIONS SUBMITTED BY SENATOR KAY BAILEY HUTCHISON

CONUS HOUSING PRIVATIZATION

Question. I was very happy to announce on June 1st that the Army was finally moving forward with the privatization of housing at Fort Hood. I commend the Army's lead in ensuring that our soldiers and their families have safe and adequate housing. At what other facilities are you planning similar, total privatization efforts?

Answer. The Army has awarded community development management plans at four pilot sites—Fort Carson, Fort Hood, Fort Lewis, and Fort Meade. Pending OSD and Congressional concurrence, the Army plans to solicit 25 additional privatization projects between fiscal year 2001 and fiscal year 2003. The candidates are for fiscal year 2001, Fort Bragg, Fort Campbell, Fort Stewart/Hunter Army Air Field, and Fort Polk; for fiscal year 2002, Presidio of Monterey, Fort Irwin/Moffett Federal Airfield/Camp Parks/Fort Hunter-Liggett, Picatinny Arsenal, Fort Detrick, Walter Reed Army Medical Center, Fort Hamilton, Fort Belvoir, Fort Eustis/Fort Story, Fort Shafter/Schofield Barracks, Fort Riley, Fort Leonard Wood, and Fort Leavenworth; for fiscal year 2003, Fort Sam Houston, Fort Bliss, Fort McPherson, Fort Gordon, Fort Benning, Fort Rucker, Redstone Arsenal, Fort Drum, and Fort McCoy.

OVERSEAS HOUSING PRIVATIZATION

Question. Is the Army pursuing any similarly innovative housing initiatives overseas? For example, has the Army discussed with the Germans, Japanese, or Korean governments the possibility of those foreign governments could construct housing for use by American service members, which could revert back to control of the host nation in, say, 50 years?

Answer. Yes, the Army looks for host nation funding whenever possible. In Korea, Republic of Korea funded construction (ROKFC) funds can be used for construction of Army family housing. The ROKFC program provides the funds to the U.S. Government for Corps of Engineer design and construction. The Eighth U.S. Army's family housing master plan calls for the construction of 96 ROKFC funded units per year between fiscal year 2001 and fiscal year 2010. In Germany, limited residual value funds are available. Current projections estimate that approximately $15 million will be available by fiscal year 2003 to fund family housing renovations. In addition, U.S. Army, Europe is looking at finding private investors to build family housing where feasible and rent back to the Army. In Japan, the Japan facilities improvement program (JFIP) provides limited funds for operating Army family housing utilities and replacement construction. However, the schedule of JFIP is at the discretion of the government of Japan.

WELL BEING

Question. In addition to providing more adequate family housing, what other quality of life issues need to be addressed today?

Answer. The Army needs to stay on track to finish building barracks to the 1+1 standard for permanent party soldiers by 2008. Beyond that, we need to improve physical fitness training centers for our soldiers and improve Army National Guard and Army Reserve facilities.

The percentage of enlisted soldiers who have some college education has doubled since 1985. This provides them with lucrative employment opportunities in the civilian sector. To retain these soldiers, we need to increase their salaries to compete with civilian wages.

Army warrant officer recruitment is seeing a downward trend since last year's pay table reform, which raised pay for E–5 to E–7s. Warrant officer pay should be proportionally increased to keep pace with raises in NCO salaries. Failure to do so would further compress the pay table and there would be no incentive to become a warrant officer.

The Army is experiencing a greater than historical captain's attrition. This attrition increase alone would not be significant, but when combined with smaller year

groups assessed during the draw down and decreasing end strength targets, each captain loss has a much greater impact. The O–3 pay cell is the only grade in the pay table where the Army and other Services are currently having problems with retention.

The Surgeon General has identified for fiscal year 2002 requirements in excess of funding for the direct-care system of $675.1 million, including $347.4 million identified as critical. This shortfall is in addition to any potential shortfalls identified by the TRICARE management activity related to private sector care through the Managed Care Support Contract.

Personnel tempo (PERSTEMPO) is one of the primary quality of life factors impacting unit readiness. Key concerns are military occupational specialty (MOS) retention rates; non-availability rates of personnel resulting from the Army's deployment stabilization policy; the number of training days a unit requires after a deployment to achieve combat readiness; the skill tempo by MOS and the deployment tempo of units that fall into the high-demand/low-density category. Although studies show that some level of deployment is acceptable, when the length and frequency of deployments increase, it negatively affects the Army's ability to retain soldiers and man the force.

BASE CLOSURE

Question. Secretary White, an article ran in this Monday's Defense Daily indicating that you would support at least one additional round of base closure. I am not sure that we have actually realized any cost savings from the last few rounds of Base Realignment and Closure (BRAC) due to environmental clean-up and other turnover costs. I am also concerned by the way Department of Defense (DOD) presently manages its infrastructure. How can the Congress confidently grant base closure authority, given that the Department currently does a sub-par job of managing its facilities? If granted such authority, how would the Army maintain enough facility growth capacity for surges or if overseas units had to redeploy to the United States?

Answer. The Army manages its facilities professionally and to the best of our abilities within the resources provided. We managed the previous four BRAC rounds successfully. We reduced our real property inventory by approximately 21 percent and were able to realign selected installation functions to gain synergy that would not have been possible otherwise. Estimated savings from the previous BRAC rounds combined is $944 million per year, which includes savings from military construction, family housing, operations and maintenance, and personnel. The break-even year of savings greater than costs was 1997. Environmental cleanup costs to date have been $2 billion with estimated remaining costs of $1.07 billion. The Army's remaining BRAC environmental liabilities can be paid with slightly more than one year of savings. However, we recognize that we still have excess facilities that can best be corrected through comprehensive BRAC authority to close and realign our bases to fit the missions and requirements of the transforming Army.

Previous BRAC analyses followed a formalized process. Part of the process established the military value of our installations. BRAC analyses included evaluation of installation capacity to support all military requirements including contingencies, redeployments, and force structure surges. If new BRAC authority is granted, the next BRAC analysis process should include similar evaluations that can address potential facility-growth capacities for changing Army missions or restationings.

INSTALLATION SECURITY

Question. I understand the necessity of improving security on our Army bases, in light of today's increasing threat of terrorism. However, as many facilities are considered an integral part of the communities in which they are located, I hope the Army will coordinate its efforts with state and local leaders, and will publicly explain the rationale behind its moves. Will you commit to making such efforts?

Answer. As you mention, the threat to our military installations is increasing. To address these risks, we are taking positive steps to increase security measures to protect the people and property on our posts worldwide, including limiting access to our facilities. We recognize that the communities in which we live and work are an integral part of our Army. As such, we coordinate all of our security efforts with community leaders. Our provost marshals maintain constant liaison with local and state leaders and police agencies in the coordination of security matters, including sharing criminal and police intelligence, especially in police response operations. We have undertaken an aggressive campaign to inform the communities of our actions in controlling access to Army installations. The Army requires that commanders coordinate with local, state, federal, or host country officials to ensure integrity of re-

stricted access and to reduce the effect on surrounding civilian communities. Our access control measures are consistent with applicable law and consider statutory and local labor-relation obligations. Persons not associated with the performance of the installation mission, i.e., visitors, will be required to obtain a temporary visitor pass to gain access to the installation.

RESERVE COMPONENT UTILIZATION

Question. As was mentioned in your joint statement, the 49th Infantry Division, a National Guard unit from Texas, was deployed to Bosnia last year. This was the clearest demonstration yet of our nation's growing reliance on the Guard and Reserve to conduct even day-to-day military operations, a trend that concerns me greatly.

What insights has the Army gained as a result of that deployment? Has that assignment, or the prospect of returning to Bosnia this October negatively impacted retention rates in the 49th? What do members of other Guard units from around the country think of this new practice? How do routine, six month-long overseas deployments fit in with the American public's view of the National Guard as our nation's "minutemen?"

Answer. As overseas commitments continue to increase, there is a greater reliance on Reserve component (RC) forces to integrate with the active component (AC). The 49th Armored Division's contributions, as well as those of other RC organizations, in support of operations in Bosnia have provided greater flexibility to the AC by allowing units to be reassigned to other critical missions and by reducing AC personnel tempo (PERSTEMPO) and operational tempo (OPTEMPO).

While AC PERSTEMPO and OPTEMPO have been reduced through the use of the RC in this instance, increases in RC PERSTEMPO and OPTEMPO and employer sentiments to extended deployments offer certain challenges. The 49th Armored Division launched an aggressive employer support campaign that provided early notification to employers and educated employers of the vital role of their citizen-soldiers for peacekeeping operations. After arrival in theater, employer relations were maintained by allowing executive visits to Bosnia. Additionally, soldiers were provided the means and encouraged to stay in touch with employers. Other significant insights include improved unit readiness, realistic training, improved staff-level command and control execution, and individual soldier readiness and preparedness.

The plan to integrate AC and RC forces was truly manifested into reality under the command and control of the 49th Armored Division. Other Army National Guard units will also be given command and control responsibility for six out of the next seven scheduled Stabilization Force rotations for Bosnia. the Army continues to transform, new methods of utilizing the RC in an ever-changing operational environment will be explored to take full advantage of RC capabilities.

It is still too soon to tell the impact on retention that the rotation had on the 49th; however, current indications are that there was no negative impact. The Guard and Reserve have each conducted studies that concluded that there does not appear to be a significant difference in attrition rates within units that have mobilized and units that have not mobilized.

Our capability to expand the active force rapidly and efficiently through mobilization is essential in deterring potential enemies. Our Reserve components soldiers see opportunity to serve using their skills in ways that they can see the impacts. However, we must be careful that, as we call on the RC to meet the Army's global requirements, we ensure our practices allow the greatest amount of lead time in notification to allow for adequate preparation.

On the whole, traditional soldiers approve of the Reserve component's new mission, but do not like the current training and mobilization process. We serve our soldiers, their families, and employers best when we first federalize a unit and then train all unit members on mission specifics. Deployment follows only after this is complete. Not only is this a more effective and efficient deployment process, it adds to the continuity of training for the soldier, and to the continuity of the planning process for the soldier's family and employer. The end result is a proficient soldier prepared to conduct the mission.

The Guard and Reserve are following rotational policy guidance of 179 days in theater for Balkan operations. We have discussed shorter rotations such as 120 days or 90 days for the Balkans. The Army National Guard currently deploys units on shorter rotations to Southwest Asia and has reduced rotational lengths for medical personnel, lawyers, and aviation assets. Discussions continue on the feasibility for shorter Balkan rotations and the potential impacts on units, families, and employers, as well as the potential impacts on funding such as added transportation requirements for personnel and equipment and training site usage. As the RC takes

on more of a role, we will continue to work toward better solutions that will reduce the tempo for all components of the Army.

QUESTIONS SUBMITTED TO GENERAL ERIC K. SHINSEKI

QUESTIONS SUBMITTED BY SENATOR DANIEL K. INOUYE

LEGACY FORCE

Question. Some have argued that the Army cannot afford to maintain readiness, modernize the Legacy Force, build the Interim Force, and develop the Objective Force all at once without cutting force levels. What is the possibility that the Army will be faced with having to cut forces to meet its Transformation goals? Has the Army considered cutting force structure and, if so, where would the cuts most likely be made?

Answer. The transformed Army may have the ability to execute its missions at lower force levels in the future, but we are not prepared to make that assumption today and believe it to be an imprudent approach to securing the vital interests of the Nation. The Army is clearly too small today for its current mission profile. Cuts should only be considered in conjunction with the defense strategy and review of all forces required to support a new National Security Strategy and National Military Strategy.

Numerous studies and Congressional testimony from the Army, other Services, and Office of the Secretary of Defense (OSD) document the serious strategy-to-resource mismatch under which we currently operate. The Quadrennial Defense Review process, as it has emerged to date, clearly appreciates that without a change to the strategy and/or current force levels and attendant capabilities, our Armed Forces will continue to decline in both relative and absolute terms. Inevitably, this will degrade the Nation's security.

The Army must balance Legacy, Interim, and Objective Force requirements. All three are necessary to transform the force and maintain current readiness for future capabilities. In the interim, and pending definitive proof that transformed capabilities are adequate to supplant current Legacy and Interim Forces, the Army must maintain readiness in existing Legacy and developing Interim Forces.

The Army needs more forces today to execute current missions, and force cuts place the remaining forces at too high a tempo. The Army has consistently maintained that 12-plus active divisions and their supporting forces are required to accomplish ongoing missions, sustain readiness, and transform the force. Current active component forces are already two-plus divisions short and rely heavily on reserve component forces to meet commander-in-chief needs. However, growing concern among reserve component members, their families, and employers for frequent, lengthy tours outside of the United States indicates that we cannot continue this approach indefinitely to meet operational needs.

The Army plans to invest in Transformation to revolutionize the ground component of future war. The current Program Objective Memorandum fully funds procurement of over 2,000 Light Armored Vehicle's to equip six Interim Brigade Combat Teams, funds approximately $8.5 billion in science and technology for Objective Force experimentation and Transformation, and provides funds to recapitalize the Counter-Attack Corps. The Army has accepted significant risk with the current force through internal force reductions and partial funding of modernization programs.

The Army has removed 25 percent of its main battle tanks, infantry fighting vehicles, and artillery systems in anticipation of fielding enhanced capabilities in Comanche, Crusader, and numerous digitized systems.

INTERIM FORCE

Question. The Congress last year added funds to enhance your efforts to build your Interim Force. Can you give us a status report on how those funds have been used and how this program is proceeding?

Answer. Congress' support for the Interim Force last year was critical to the Army's ability to begin establishing an interim capability at Fort Lewis, Washington. In the Fiscal Year 2001 Defense Appropriations Act, Congress added $150 million for research, development, test and evaluation (RDTE), $400 million for weapons and tracked combat vehicles (WTCV), and $200 million for Other Procurement, Army (OPA) to expedite fielding of the Interim Force.

A total of $258 million for fiscal year 2001 RDTE was appropriated. The bulk of this funding was awarded to provide integration engineering efforts required to marry ten mission equipment packages with ten platform configurations. The re-

mainder was issued for government support and engineering, modification of training devices, test planning, and seven Mobile Gun System prototypes. Carryover funding will be applied to the contract integration engineering efforts and fiscal year 2002 requirements, to include testing.

A total of $928 million for fiscal year 2001 WTCV was appropriated. The bulk of this funding was obligated against delivery orders for the procurement of vehicles for the first Interim Brigade Combat Team (IBCT), equipment for production and fielding of these vehicles, integrated logistics support for the vehicles, and program management support. The remaining funds will be obligated in early fiscal year 2002 to procure vehicles for the second IBCT, along with equipment, logistics support, and training devices.

The Army used the additional $200 million OPA to purchase a wide range of equipment and support systems for the IBCTs. Chief among the items purchased were a range of command, control, communications, computers and intelligence systems, various wheeled tactical vehicles, night vision devices, and other combat support and combat service support equipment and systems.

The Army awarded the Interim Armored Vehicle (IAV) contract to General Motors/General Dynamics Land Systems Defense Group Limited Liability Company in November 2000. United Defense, Limited Partnership (UDLP) filed a protest with the GAO in December 2000 for an examination of the source selection process for the IAV program award. In April 2001, GAO notified UDLP and the Army of its decision to deny UDLP's protest. The GAO's decision was released on May 2, 2001. UDLP has not pursued further action, and delivery of the first vehicles is scheduled for February 2002.

TRANSFORMATION CHALLENGES

Question. General Shinseki, in your testimony you note that Transformation will affect all aspects of Army life: training, logistics, supply systems, base infrastructure, and so on. Changes to these areas likely will provoke some controversy and significant costs. In which of these areas do you expect change to create the greatest challenge?

Answer. Transformation is far more extensive than just modernizing equipment and the physical construct of the posts, camps, and stations we operate in. Certainly, the Army will see changes in doctrine, training, leaders, organizations, materiel, and soldiers as we continue to move from the Legacy Force to the Objective Force. Our biggest challenge in this process is continuing to look at the emerging strategic environment we will be asked to operate in and shaping the training and leader development that will be required of our Objective Force soldiers and leaders.

TRANSFORMATION MODELS

Question. Are there any models of corporate business transformation that may shed light on the Army's plan?

Answer. The Army has taken and continues to pursue from industry and the corporate world, business practices and innovative approaches that would be appropriate for our use in improving our efficiencies and effectiveness as we transform the Army. We have already adopted many business practices that allow us to reduce costs and realize savings that ultimately makes more funds available for readiness, modernization, and well-being programs for our most critical assets—our people and their families. These elements are all essential to our efforts to transform the Army.

We have gone to several of our Nation's leading industry firms and looked at how they have transformed to meet tomorrow's challenges and adopted what was appropriate for our use. We are already challenging the manner we have used to acquire, test, and evaluate our equipment and have implemented new and improved business practices in our approach to procure the Infantry Carrier Vehicle and the Mobile Gun System.

Additionally, we are adding emphasis within the Army Transformation Campaign Plan for addressing better business practices across all of the proponents responsible for Transformation and, at Secretary White's direction, are looking at what more we can do to ensure we are using the most effective and efficient means available to assist in the Transformation of the Army.

CRUSADER

Question. The Crusader system has been criticized as not being a "leap-ahead" technology. How do you respond?

Answer. Crusader not only provides a leap ahead to the force it supports, but also provides a more efficient and effective developmental path for the Army's future combat systems. Crusader provides a significant leap ahead in combat power over

our current M109A6 Paladin and the latest howitzers being introduced by other countries. Crusader employs more than two dozen cutting-edge technologies for the first time in a ground combat vehicle. Some of the technologies include a state-of-the-art cockpit that includes embedded command, control, and training; fully automated ammunition handling, including inventory management, recognition, transfer, loading, and docking; vulnerability and susceptibility reduction that incorporates integrated composite armor, detection avoidance, and remote operated secondary armament; electronics architecture that employs a new real-time common operating environment and fault management, fully integrated combat knowledge and decision aids; and a revolutionary new cannon assembly with an actively cooled cannon and gunmount, laser ignition, and projectile tracking system that improves accuracy. This is just a partial list of some of the new technologies being introduced in Crusader.

The technologies in Crusader allow the Army to employ tactics and doctrine for the first time that rely on cockpit automation, robotics, and information exploitation in lieu of soldier performed tasks. Crusader also provides unmatched synergy within the force as it capitalizes on advanced technologies to integrate with manned and unmanned ground and aerial platforms that employ information-dominant, network-centric warfare. Crusader equipped battalions will provide the commander with continuous, immediate, all weather, 360-degree precision fires at an unprecedented 50 kilometer range, assisted and a sustained rate-of-fire in excess of 11 rounds per minute. The new technologies employed in Crusader make it strategically deployable with enhanced lethality, mobility, sustainability, and readiness.

Question. Given the cost of this system, would the Army be better served to invest in smaller, more mobile and potentially more lethal artillery systems?

Answer. No. We need the improved lethality, strategic and tactical mobility, sustainability, and reliability that Crusader will provide to our force now. We do not believe that we could have a smaller, more mobile, and more lethal system that could perform Crusader's role in time to support the requirements of our transforming Army. The market survey and analysis done before we embarked on Crusader supports this position, as does the continuing monitoring and assessment of emerging new systems and technologies. We believe that Crusader is the best cannon artillery system to support Army Transformation.

ARMY TRAINING AND MANNING

Question. How has your initiative to fully man the Army's combat units influenced training this year?

Answer. The Army manning initiative is a deliberate effort to ensure that our warfighting forces have the personnel they require. The initiative to fully man our combat units has had a positive effect in several ways and is reflected in higher unit readiness. Division training level indicators are at their highest levels in the past four years. Personnel manning for these units is at the highest level in the last five years. This is due to the priority for personnel these units received from the manning initiative. With increased personnel, units are more capable of conducting individual and collective training and executing the Combined Arms Training Strategy.

Question. What are your plans to fully man the supporting institutions of the Army?

Answer. The Army's ability to fill all units to 100 percent of authorizations depends on balancing a number of factors, such as synchronizing force structure with Congressional mandates, attrition, retention, and recruiting.

During fiscal year 2000, we increased the manning of our divisions and armored cavalry regiments to 100 percent. We will fill the rest of the force during the next three years. In fiscal year 2001, we will continue to fill the 10 active component divisions and the armored cavalry regiments to 100 percent. We will also fill the early deploying units above division level to 100 percent of authorizations. In fiscal year 2002, we will fill the remaining table of organization and equipment (TOE) units to 100 percent. In fiscal year 2003, we will fill the remaining TOE units and the Department of the Army approved table of distribution and allowance to 100 percent.

TRANSFORMATION

Question. Programs that recently suffered difficulties after fielding were approved for full rate production based on passing Operational Testing and Evaluation (OT&E). What is being done to improve upon the accuracy and reliability of Army testing and to avoid these costly failures in the future?

Answer. The purpose of Army test and evaluation (T&E) is not to pass or fail systems, but to characterize in a realistic operational environment that systems are ef-

fective, suitable, and survivable. The U.S. Army Test and Evaluation Command (ATEC) strives to conduct the highest quality developmental and operational testing and experimentation possible to provide information to support Army evaluation and milestone decision authority requirements within the available time and funding. Tests and experiments are designed to provide specific data to support evaluations as input to full rate production and materiel release decisions.

Unfortunately, overall reductions in the Army's T&E infrastructure over the last 10 to 12 years, reduced T&E funding, and acquisition streamlining initiatives have impacted the robustness of ATEC T&E. The impact of these constraints is seen in reduced environmental tests, test duration, sample size requirements, and size of operational units employed during tests. This increases the risk that important information that might preclude fielding of a system with problems is not identified during testing.

ATEC is undertaking a number of initiatives to reduce these impacts and working to increase the rigor and realism of tests to determine if systems and equipment meet user requirements. An ATEC system team is formed for every program to bring together the principal T&E personnel to discuss and coordinate T&E activities. Risk mitigation factors are considered for each test or experiment as a means of reducing impacts. The findings of these efforts are then presented to program managers as T&E strategies are developed.

ATEC is increasing the use of modeling and simulation to investigate system and equipment performance in conditions outside typical test environments. Modeling and simulation capabilities are incorporated where possible to increase and improve the operational environment simulation, to provide for increased interactions within the simulated environment, and to create simulated organizational structures for improved realism and increased information flow. Modeling and simulation tools are being developed to extend test data and provide repetition of test events.

ATEC is striving to modernize the T&E infrastructure; however, with current budget shortfalls, this will require an extended period of time, and in the interim, will cause a decreased ability to support T&E needs. This modernization will help better equip testers with tools to enhance accuracy and reliability. Such tools are in their infancy now. Further development is ongoing and will require future funding.

ATEC is launching an educational campaign with the Army's senior leaders, program executive officers, and others regarding the benefits of T&E and the valuable aid it provides in getting systems and equipment fielded faster. ATEC is also enlisting the aid of the National Academy of Science to ensure all possible means of mitigating the risk of not finding significant system performance deficiencies are explored.

The Army recognizes that some systems have demonstrated lower than required reliability during operational type tests over the last several years. In response, the military deputy (MILDEP) to the Assistant Secretary of the Army for Acquisition, Logistics, and Technology directed that a reliability, maintainability, and supportability workshop be conducted to identify problems and develop recommendations for their resolution. Initial recommendations were presented to the MILDEP in January 2001 and centered around the premise that reliability could be significantly improved by focusing on two main areas: to design in reliability upfront and to validate that we have reliable systems and components. Also, the recommendation included the identification of enablers for this improvement. These enablers are ensuring that government requirements are properly stated and translated during the contracting process, resourcing for execution of the process, and measuring the results. The MILDEP directed additional work on the refinement of the recommendations. This work is currently ongoing. The next update to the MILDEP is scheduled for July 31, 2001.

ARMORED SECURITY VEHICLE (ASV)

Question. Last year the Congress provided additional monies to support the Army's equipping military police units with Armored Security Vehicles or the ASVs in fiscal year 2001. To date, those funds have not yet been obligated and the vehicles have not been purchased despite the fact we are rapidly approaching the last quarter of the fiscal year. Please comment on the status of complying with the legislative direction provided in the fiscal year 2001 Appropriations Bill, what is causing the delay in purchasing these vehicles for our military police units and what your plan is to address this problem.

Answer. The ASV program received a $1.4 million Congressional plus-up to procure an additional vehicle for fiscal year 2001. The Army has every intention to comply with the fiscal year 2001 Appropriations Bill. The approximate contract award

date for the vehicle is scheduled for July 27, 2001. This option will be an additional vehicle to the 20 vehicles procured under the fiscal year 2001 contract awarded in November 2000. In addition to another vehicle, the funding expedited the fielding of 12 ASVs to a military police company in Kosovo.

QUESTIONS SUBMITTED BY SENATOR TOM HARKIN

UNUTILIZED PLANT CAPACITY

Question. Unutilized Plant Capacity (UPC) funds are critical to the arsenals to pay for capacity that is maintained for national wartime requirements, not for current contracts, and thus to keep overhead rates reasonable. Last year Congress directed the Department to include full UPC requirements in the budget. Yet we continue to hear rumors that once again full UPC funding will not be in the budget. Will you follow Congressional direction and include full funding for unutilized and underutilized plant capacity in the budget for fiscal year 2002?

Answer. While we have tried to comply with the recommendations of the Congress, budgetary constraints precluded the full funding of the Industrial Mobilization Capacity program formerly known as UPC. However, the fiscal year 2002 budget justification does show we have provided partial funding.

155 MILLIMETER LIGHTWEIGHT HOWITZER

Question. The 155 millimeter Lightweight Howitzer is a program that has been of significant local interest and that is becoming more and more of a national problem. You agreed that there is a need for this howitzer for the interim brigades, to form a lighter, more mobile force. But a recent update to a General Accounting Office (GAO) report on the program found that it continues to be significantly over budget and behind schedule, that proposed fixes to old technical problems have not been fully tested, and that there are newly discovered problems. The titanium that keeps the howitzer light weight turns out to be prone to cracking, and the new aiming system does not yet exist. I am concerned that it may be time to terminate this program and look at other options for this capability. General Shinseki, will you look at this program and consider whether it is time to cut our losses so they do not impede the Army Transformation?

Answer. The Lightweight 155 millimeter Howitzer (LW155) is a joint program with the United States Marine Corps developing the howitzer and the Army developing the digital fire control. The Army continues to assess the LW155 and our other developmental systems for their continued relevance to Army Transformation.

There is a critical and urgent need for a lightweight, highly mobile and deployable fire support system to support our brigade combat teams and the Marine Corps' expeditionary forces. The engineering analysis and preliminary testing suggests that the LW155 will meet or exceed its design requirements. We believe it is essential that the weapon complete its current test phase so that sufficient data can be obtained to support a production decision late next year.

The July 2000 GAO report raised concerns over three specific technical issues—spade size, saddle, and titanium welds. As reported in the April 2001 GAO follow-up report, the spades are now properly sized and being installed onto the prototypes. The GAO report also noted that the new saddle was successfully field tested. The one small crack observed in the titanium weld during initial firings of the first engineering and manufacturing development prototype weapon 10 months ago was repaired and has since been subjected to over 800 rounds without a recurrence.

The four technical issues identified in the April 10, 2001, GAO report was minor, and remedies have already been incorporated into the LW155 design. First, the spade crack discovered was addressed by a spade design iteration. The latest spades have been reinforced to withstand worst-case conditions. Second, a new spade latch has been incorporated that provides greater robustness and protection to the hinge area from sand, grit, and moisture. Next, a new two-position damper to replace the single-setting damper was incorporated into the design to optimize weapon stability in all soil conditions. And finally, the optical sight, which experienced retention problems, has been redesigned to withstand greater shock loading.

The current howitzer was selected after an extensive live-fire shoot-off in which it was determined to be the winner over two other prototypes. Identifying and resolving technical issues such as those described above are commonplace and the very reason for this stage of development. The LW155 program is on track for the September 2002 full-rate production decision.

The Marine Corps delayed the program's full-rate production decision to September 2002 based on problems with the manufacture of the initial engineering and

manufacturing development weapons which have since been resolved. The $20.2 million cost growth is driven not only by the delay in the program, but also by adding a pilot production run to enable the U.S. manufacturers to gain experience with building weapons before the start of production. There has been no increase to anticipated production costs of the LW155, as the first two years of production are covered by fixed-price contract options.

The acquisition plan for the LW155 has always planned for the development of the Army's portion of the program, the digital fire control system, to lag behind the Marine Corps' development of the basic howitzer. This delay minimizes the risks associated with integration of the fire control onto the howitzer. Initially, only the Army's LW155 howitzers were going to be equipped with the digital fire control. After reviewing the Army's experimentation with digital fire control on towed howitzers, the Marine Corps decided to include digital fire control on their howitzers.

QUESTIONS SUBMITTED BY SENATOR KAY BAILEY HUTCHISON

TRANSFORMATION STATUS

Question. General Shinseki, what is the status of your efforts to "Transform" the Army? Your vision would seem to dovetail nicely with Secretary Rumsfeld's desire to transform the Department of Defense. How have your ideas been received by the Pentagon's new senior leadership?

Answer. We have moved out and made significant progress this past year in a number of areas. Our efforts are in line with Secretary Rumsfeld's desires and we have synchronized The Army Vision and the supporting Transformation Campaign Plan with the National Security Strategy, the National Military Strategy and Joint Vision 2020. Two key documents, Field Manual 1, "The Army," and Field Manual 3, "Operations," have been written and recently published. We are now in the process of completing several of the organization and operational designs for the new organizations and have stood up a task force to facilitate the accelerated fielding of the Objective Force this decade by integrating and synchronizing its warfighting capabilities and technologies.

Two Interim Brigades have been formed at Fort Lewis, Washington, with surrogate and loaned equipment while we undergo procurement of the Interim Armored Vehicle. Simultaneously, to ensure the readiness of the force, the Army has manned the 10 divisions and two armored cavalry regiments to 100 percent and reduced the headquarters manning accordingly. Panels on well-being, turbulence, readiness, leader development, and training have been established to assist in our transition. The information gained from these panels has been integrated into our overarching Army Transformation Campaign Plan. We have also introduced a number of key recruiting and retention initiatives based on information obtained from these panels.

The Army has aligned spending in science and technology (S&T) to develop the operational capabilities of the Objective Force to allow the Army to have its first operational capability in 2010 following certification of the first Objective Force unit of action. The S&T funding currently is 97 percent of the requirement.

Our efforts to transform the Army have been briefed to many of the Pentagon's new senior leadership, and we continue to receive superb support as we move down the path of Army Transformation.

DIGITIZATION

Question. What is the status of the "digitization" of the III Corps at Fort Hood?

Answer. The Army remains committed to equipping III Corps with essential digital capabilities as the Army transforms its forces. The Army is focused on the Objective Force as the first priority and the Interim Force as the near-term solution to today's needs. However, the Army remains fully committed to recapitalizing and modernizing the Legacy Force beginning with III Corps. To date, the Army has successfully fielded essential digital systems to the 4th Infantry Division at Fort Hood and successfully conducted the first phase of the division capstone exercise at the National Training Center in April 2001. The Army is continuing to develop, test, acquire, and field key digital systems to the 1st Cavalry Division in 2002 and 2003 and the remainder of the 4th Infantry Division, followed by the 3rd Armored Cavalry Regiment and Corps elements in subsequent years. The Army's efforts to equip III Corps with digital capability will not only enhance the combat power of III Corps, but will also enable Transformation to take shape with the focus on the Objective Force.

ENVIRONMENTAL CONCERNS

Question. General Shinseki, members of this Subcommittee have become increasingly aware of the growing impact environmental concerns have on the Army's ability to thoroughly and realistically train its forces. Some of my colleagues in the House are so concerned about the matter, they are considering a legislative remedy. Would you please describe the impact environmental constraints are placing on the Army's ability to train?

Answer. In the Army, we use the term encroachment to refer to all external influences threatening or constraining testing and training activities required for force readiness and weapons acquisition. Such encroachment stems from environmental, social, and economic influences. Impacts include, but are not limited to, restrictions on available testing and training locations; restrictions on available times and duration for testing and training; reduced effectiveness of testing and training activities; and restrictions on weapons systems, equipment, and munitions used during testing and training.

Unit commanders have not reported lowered training ratings solely due to encroachment issues. However, several units reporting reduced readiness ratings have provided comments on their unit status reports identifying training constraints. Instead of allowing these constraints to reduce unit training status, commanders have developed "work-arounds" to continue training to maintain their readiness posture and to accomplish the mission. Although these work-arounds must support training requirements based on doctrinal standards, they make the training experience suboptimal. When training combines a number of work-arounds, the adverse impacts on training are magnified and cumulative.

The Army's primary encroachment concerns are urban sprawl, threatened and endangered species, and restrictions that impact our use of munitions. Urban sprawl and unchecked residential and community growth may present conflicts with our neighbors over noise, dust, and other effects of Army training. In some areas, it triggers a competition for natural resources. When our installations were established, they generally were in rural areas, remote and isolated from populations where public awareness of live training activities was minimal. That has changed. The sum effect has been that Army installations, once far from public view, are now often in the midst of large urban areas. Population and urban growth around installations have caused ranges and training lands to become "islands of biodiversity," increasing their natural resource value. Our training practices bring noise, dust, the expenditure of munitions, and ground activities that can be viewed as a nuisance and annoyance to those who have become our neighbors.

Managing endangered species in accordance with existing regulations has been, and continues to be, a great challenge. As a land-based force, we need land to train. Our important training installations are large and are needed to accommodate air and ground maneuver using our increasingly mobile weapons systems. Endangered species regulations have required us to review our training activities to ensure that they do not jeopardize the continued existence of an endangered or threatened species. In some cases, we must modify our training activities to meet that requirement. One salient example is a $24 million range complex on the island of Hawaii that has never been used for the training for which it was designed and built due to extremely restrictive mitigation measures designed to preserve endangered plants. As the number of listed plants and animals increases, the amount of land available to us for unmodified training activities may decrease further.

Our concerns about munitions focus on the future. At one of our ranges, the Army National Guard's Massachusetts Military Reservation (MMR), we have encountered regulatory actions that impacted our operations. For the first time, the EPA has administratively stopped our live-fire weapons training by exercising authority under the Safe Drinking Water Act. The use of environmental regulations to curtail training activities must have a scientific basis. Given the fact that our units employ a large number and type of weapons and that we train with those weapons on literally thousands of ranges, the potential for cessation of live fire training is of great concern to us. All Army installations with training areas and ranges are vulnerable to imposition of environmentally based restrictions on live fire training. The potential impact of further administrative cease-fire orders cannot be measured, other than to say that major training and training readiness investments would be affected. The regulation of munitions is a complex issue that requires deliberate measures in the areas of environmental research and development, risk assessment, range design, and range management. Unilateral orders to stop firing while we investigate these challenging issues will impact readiness. A more balanced approach is warranted. Such an approach should ensure that policy makers weigh national security concerns, as well as environmental stewardship interests.

As currently written, several statutes contain broad discretionary enforcement thresholds that are based on the assessment of the regulatory authority as to whether a given condition presents a potential risk or imminent hazard to human health or a particular natural resource. While the Army is not seeking to avoid our responsibilities to the American people or seeking relief from compliance with environmental statutes, the lack of consistent and measurable assessment and enforcement standards limits the Army's ability to plan, program, and budget for the necessary compliance requirements. In light of the Secretary's current strategic review, it would be premature to discuss specific proposals, but I look forward to working with other federal agencies and Congress.

ACTIVE DUTY DIVISIONS

Question. A number of articles have appeared recently which assert that the number of active duty divisions may be cut from ten to eight. Are either of you aware if Secretary Rumsfeld is even considering such dramatic restructuring of the Army as part of his "strategic review?" What are your thoughts about such a proposal? How would such cuts affect the Army?

Answer. Force levels to support 2001 Quadrennial Defense Review, to include restructuring, are now being considered. The Secretary of Defense has not yet made any decisions with respect to the strategic review, so it would be premature to comment on the specifics of any pending changes in Army organization or force structure. The Army leadership is committed to providing the Secretary of Defense and his staff with our very best professional judgment, advice, and analysis regarding force structure requirements to implement the new defense strategy.

We have been heavily engaged in making our requirements known, based on a strategy of what this Nation's interests are and what we see as requirements for the Army to meet the National Security Strategy. While the future security environment is uncertain, the Army believes that winning the Nation's wars is an enduring requirement and that challenges to our security and well being will continue. Both will demand landpower, with the capability to assure allies, deter conflict, dissuade adversaries, and conduct sustained and decisive operations across the full range of military operations. This includes the capability to win decisively—defeating both the adversary's ability and will to fight or wage war—with victory being incontrovertible and significant military threats eliminated.

The Army's future capabilities must include the ability to deter or preclude conflict, and if that fails, decisively win war; conduct a broad array of smaller-scale contingencies concurrently; sustain acceptable personnel and operational tempo; and meet current and anticipated homeland security challenges. Simultaneously, the Army must have sufficient forces and resources to experiment and transform to meet tomorrow's joint force requirements. Our Nation's security requires these capabilities.

Army experience and analyses continue to show today's force structure is too small to meet those requirements. An adequately sized force ensures a rotation base of trained and ready forces to conduct a full spectrum of operations within acceptable tempo. The force must also possess a full array of capabilities necessary for decisive victory in war. This includes a structure with sufficient operational depth to ensure appropriate span of control, economies of scale and sustained campaign capability. Today's Army works hard to meet these vital requirements as it implements an imperative, comprehensive experimentation and transformation plan. Given the uncertain and growing range of challenges we know we will face in this century, Army force structure of at least today's size appears warranted and prudent.

As we conduct the Defense review, the Army believes it is essential that we not attempt to predict the future and then optimize a force consistent with our predictions. The consequences of guessing wrong are too severe—we cannot break our non-negotiable contract with the American people to fight and win the Nation's wars. Instead, we should recognize the uncertainties and potential for dramatic change associated with our future security requirements and preserve the key military capabilities that provide our Nation's leaders with a robust set of options in times of crisis. We believe strongly that the American soldier will continue to be a centerpiece of our Nation's Armed Forces in the decades to come.

INFORMATION SHARING

Question. General Shinseki, this month's Janes IDR reports that the Army and the Marine Corps are close to signing an information sharing agreement covering each Services' efforts to develop and field new families of armored vehicles. While I applaud the move, I am concerned that the agreement may not be broad enough to cover more than a few common items such as fuel cells. What stands in the way

of applying the Joint Strike Fighter model to armored vehicles? Why can't the Army and the Marine Corps jointly develop new armored vehicles that are at least 85 percent common? After all, both services share the goals of replacing the M1A1 tank and variants of the Light Armored Vehicle.

Answer. Nothing stands in the way of the Army and Marine Corps maximizing our cooperation in the development of new armored vehicles. The degree to which our vehicles could be made common would be dependent upon our individual Service stated requirements.

AGING INFRASTRUCTURE

Question. I am very concerned about the aging infrastructure of our military posts. What is the shortfall of your Sustainment, Restoration, and Modernization account for the Army? Does the proposed supplemental budget from DOD address those shortfalls adequately?

Answer. Due to the extended period of facilities sustainment underfunding, Army facilities have deteriorated to a C3 installation status report level. The current unfunded backlog to bring facilities to C1 is $17.8 billion. The Army's request of $126 million for additional sustainment funding in fiscal year 2001 would be a welcome step towards achieving the needed level of annual sustainment funding and would assist installations in returning from an "emergencies only" mode to a prudent level of support. The Senate's higher amount provides an increased recognition of the importance of halting deterioration and brings fiscal year 2001 capabilities closer to a full sustainment level.

FAMILY OF MEDIUM TACTICAL VEHICLES (FMTV) FUNDING

Question. I have read press reports indicating that the Army's fiscal year 2001 supplemental request to OSD included $33 million in funding for the Family of Medium Tactical Vehicles (FMTV). Yet the supplemental request I read does not include funding for FMTV. Please describe how including FMTV funding in the fiscal year 2001 supplemental will help enhance the readiness of the Army.

Answer. The funds identified for FMTV in press reports would have procured vehicles to replace those shifted to the formation of the first Interim Brigade Combat Teams at Fort Lewis, Washington, the Army's highest priority. Original planned allocation of vehicles to the Army Reserve and National Guard would have been restored, thus keeping those modernization efforts on schedule.

SUBCOMMITTEE RECESS

Senator INOUYE. The subcommittee will stand in recess until June 20. At that time we will hear from the Secretary of the Navy and the Chief of Naval Operations. Thank you.

[Whereupon, at 11:20 a.m., Wednesday, June 13, the subcommittee was recessed, to reconvene at 10 a.m., Wednesday, June 20.]

DEPARTMENT OF DEFENSE APPROPRIATIONS FOR FISCAL YEAR 2002

WEDNESDAY, JUNE 20, 2001

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. Daniel K. Inouye (chairman) presiding.

Present: Senators Inouye, Stevens, Cochran, and Bond.

DEPARTMENT OF DEFENSE

DEPARTMENT OF THE NAVY

STATEMENT OF HON. GORDON R. ENGLAND, SECRETARY OF THE NAVY

OPENING STATEMENT OF SENATOR DANIEL K. INOUYE

Senator STEVENS. The committee is pleased to welcome the Secretary of the Navy, the Honorable Gordon England; the Chief of Naval Operations, Admiral Vernon Clark; and the Commandant of the Marine Corps, General James Jones. Gentlemen, I thank you for being with us this morning. I want to especially welcome the new Secretary because I believe this is your first appearance before any Congressional committee.

Mr. ENGLAND. Yes, sir, it is.

Senator INOUYE. We look forward to working with you, sir.

Mr. ENGLAND. Thank you.

Senator INOUYE. Let me note for the record that I think you made a bit of history here. All three of the service secretaries made their first appearances before this committee, so I thank you very much, sir.

Mr. ENGLAND. Thank you, sir.

Senator INOUYE. Today's hearing is the final in a series of committee reviews of the military service programs. As all of us are aware, we have not received the Pentagon's final budget request for fiscal year 2002. Unfortunately, this will limit our ability to fully engage on the Navy and Marine Corps needs for the coming year. Nonetheless, Senator Stevens and I felt we should begin to lay the foundation for our upcoming fiscal year 2002 review. But we are hoping for a full discussion of your programs as we prepare for what could be a long summer.

Some could argue that the Navy and Marine Corps are at a crossroads. Many of your most viable, visible, and critical/modernization programs have come under fire, such the Osprey, the DD–21 destroyer, and the aircraft carrier replacement program, and the Joint Strike Fighter. In addition, the Navy has struggled in recent years to maintain ready forces and both services are saddled with aging infrastructure and an underfunded shipbuilding program that pulls resources away from modernization and readiness programs.

This committee is fully aware of the challenges facing our naval forces and it is clear that there are some tough choices to be made about which path the Navy and Marine Corps will follow. But may I assure you, sir, that this committee will work diligently to provide you with the adequate resources you will need to modernize and support the greatest naval forces in the world today.

My colleagues and I hope that the Department's fiscal year 2002 budget request and the Secretary's strategic review will meet these challenges head-on. We cannot afford to pass up this opportunity. That is why I strongly urge you, as I have urged your counterparts in other services, not to let it slip away.

Finally, the administration recently submitted the fiscal year 2001 supplemental appropriation request. We may have some questions about that, but let me assure you that the committee is fully aware of the urgent need of these funds.

Before calling upon you to testify, may I turn to the co-chairman of the committee, Senator Stevens, for opening remarks.

STATEMENT OF SENATOR TED STEVENS

Senator STEVENS. Well, thank you very much, Mr. Chairman. I do join in welcoming Secretary England to this committee and also General Jones and Admiral Clark.

I remain really seriously concerned about the state of our sea forces. My State joins yours, Mr. Chairman, as a forward projection site for our armed services, and the Pacific region I think is still the most critical area in the world to our future. Despite the challenges we face out there, the maritime force projection capability continues to shrink in my judgment and appears to be burdened by programmatic challenges on several different fronts.

When I was in your chair, Mr. Chairman, I tried, as you know, for 2 years to find a means to increase ship production and to maintain an adequate presence. We do not have either Navy or Marine Corps in my State, despite the fact we have half the coast line in the United States. It is not a provincial thing that I have been involved in, but yet now once again it appears that the administration will continue the policies of the past administration and oppose incremental or advance appropriations for vessels.

Mr. Secretary, I hope to be able to ask you this morning how many ships you think you can build in the next years under that approach. These shipbuilding programs are blighted by cost overruns. In the supplementals before us right now we have $222 million for cost overruns for just this fiscal year. In the projections for fiscal year 2002 already before us, we have another $800 million in cost overruns.

It does not take a rocket scientist to figure out that that is the equivalent of a new Aegis destroyer in cost overruns in 1 year. I have got to tell you, gentlemen, I think something must be done to meet the concept of how we build our ships or we are going to continue to have a shrinking naval force and marine force, and I think it is these forces that you have that allow us to still be rated as a superpower of the world.

General Jones, we have talked many times about the V–22 and the supplemental before us provides for some changes following the blue ribbon panel that you have been working with. I think it is critical for us to try to understand what is intended to be done with the V–22, to see that we can restore the faith of the Nation and the families and the marines that fly that aircraft. Our confidence has been shaken by the two most recent V–22 crashes and I am frankly very disturbed about that also, because I think V–22 represents the one great breakthrough in new technology that has enormous potential for changing military tactics for the future. Yet it does not seem to me we are moving forward to try and remove that blight on this new technology.

Finally, Mr. Secretary, I do have some questions concerning Vieques and I hope we will get a chance to ask those questions. The Commander in Chief has announced a new position on Vieques. I know that we will welcome your comments here this morning to see how we might implement that decision without deterring from the really—reducing the level of training that our forces need before they are deployed overseas.

I wish we had a full day for this hearing, Mr. Chairman, because I think there are a lot of questions I have in my mind about where we are going with regard to the forces that these gentlemen command.

Thank you very much.

Senator INOUYE. Thank you.

Senator Cochran.

STATEMENT OF SENATOR THAD COCHRAN

Senator COCHRAN. Mr. Chairman, thank you very much. It is a pleasure to join you and Senator Stevens at this hearing with the leadership of the United States Navy and the Marine Corps. In our State we are very active in our participation in Navy and Marine Corps activities. We have shipbuilding facilities, of course, at Pascagoula, Mississippi, that supply some of the most important combatants and amphibious ships for the Navy and the Marine Corps. We are very proud of that fact and we watch very closely the budget submissions that come from the administration on those subjects. We hope that the witnesses will tell us about what their plans are for the future shipbuilding needs of the Navy and Marine Corps.

Also, we are proud to be the home State for a pilot training facility. Jet fighter pilots train at Meridian Naval Air Station. We are very proud of that. Two hundred students each year train there. We have a home port in Pascagoula, Mississippi, too, for the Aegis cruiser-destroyer fleets and other ships. The *Cole* was brought to Pascagoula for repairs after the sad incident in the Near East.

The fact is that we also are proud to host the Atlantic Fleet headquarters of the Seabees. We have an active Seabees construction battalion, located there that are actively participating in our safety responsibilities all over the world.

Naval oceanographic activity and research is done also in Hancock County, Mississippi. We are also the site of some reserve forces that drill and maintain their proficiency in our State. We are proud of all of this connection that we have and a lot of our citizens are on active duty or on active duty in the Navy and Marine Corps as well.

So we are proud to be a part of this hearing. We look forward to having a good discussion about our needs for this year and what the plans are for this committee's support for your activities.

Thank you very much.

Senator INOUYE. Thank you.

Senator Bond.

STATEMENT OF SENATOR CHRISTOPHER S. BOND

Senator BOND. Thank you very much, Mr. Chairman. I do have a number of questions, so I will just wait until the question period. Thank you.

Senator INOUYE. Thank you, sir.

ADDITIONAL SUBMITTED STATEMENT

Before I call on the Secretary, Senator Craig has submitted a statement which will be placed in the record.

[The statement follows:]

PREPARED STATEMENT OF SENATOR LARRY E. CRAIG

Mr. Chairman, thank you for allowing me to submit an opening statement and questions for the record. Secretary England, General Jones, and Admiral Clark, I welcome you to the Senate and I appreciate this opportunity to ask you some questions and express my concerns about Navy programs and budget issues.

We have all been eagerly waiting for the results of Secretary Rumsfeld's Strategic Defense Review in order to determine the priorities of the Administration in defense spending and also to gauge the President's strategic goal for the years ahead.

Secretary England, in light of increasing regional conflicts across the globe, I think you would agree that a strategic trend that will continue to be in demand is our ability to project our forces over long distances in an easy, rapid and effective manner. The versatility of the expeditionary force is as important in the case of the Navy and Marine Corps, as it is with the Air Force. I recognize the value in my home state, of having an Air Expeditionary Wing whose success hinges upon its ability to quickly adapt and reach over long distances.

That is why it is so important not to cut short vital programs like the DD–21 Destroyer, which as you know, represents the next generation in naval warfare technology. The DD–21 will have the kind of versatility we need in a changing security environment, an environment that includes increased international sales of submarines and the proliferation of new submarine technology. The DD–21 will also play an important role in fire support of our Marines, and has possible missile defense applications, all at a savings of approximately one-third in man-hour costs.

Some of the most important naval testing in acoustics takes place in Idaho at the Bayview facility on Lake Pend Oreille. We would like to see that those facilities are put to good use for the DD–21. Therefore I would urge you and the Secretary of Defense to move forward with the acquisition and testing of this program, which I believe would be a vital asset to our expeditionary forces.

Thank you Sec. England, General Jones and Admiral Clark. I look forward to having discussions with you on this matter in the future. Thank you Mr. Chairman.

Senator INOUYE. Now may I call upon our new Secretary.

Mr. ENGLAND. Mr. Chairman, thank you very, very much. It is a pleasure to be here and good morning to you and Senator Stevens, and members of the committee.

Regarding your comments, I have also noticed since I have been the Secretary of the Navy that there are a number of challenges before the Department, and I appreciate your words of encouragement and support and we do look forward to working with you, sir, as we address those issues.

I am delighted first to be here as Secretary of the Navy for the very first time, as you commented, sir. I am even more delighted to be here with Admiral Clark and General Jones, and hopefully you will see us together often because we have formed a very close leadership team to guide our naval services into the future.

I do want to thank the chairman and all the members of the committee for all you have done and for your continuing support in keeping our Navy and Marine Corps team the very best in the world. I do have a written statement to be entered into the record, but with your permission I would like to make just a few comments.

Senator INOUYE. The statement will be made part of the record.

STATEMENT OF GORDON R. ENGLAND

Mr. ENGLAND. Thank you, sir.

First, as really a foundation of my tenure in office, I want you to know that I have pledged to be forthright, honest, and direct in my dealings with everyone and in every circumstance. Of course, that is exactly how I will always be with this very, very important committee, so you will find me very forthright, open, and direct in all dealings.

That said, you are aware of Secretary Rumsfeld's various ongoing defense reviews and the Quadrennial Defense Review (QDR). Although I cannot speculate on the ensuing budget, as Secretary of the Navy I will concentrate in four areas, namely combat capability, business practices, technology, and people. I feel that they are all interrelated in terms of how we proceed.

Regarding combat capability, the naval services do have a need to both modernize our equipment and enhance our capability, not just for the conventional missions but across more stressful missions, such as time-critical strike, theater air, missile defense, intelligence, surveillance, and reconnaissance. Additionally, considering the average age of our platforms, which you have alluded to, recapitalization of our capabilities does become imperative. That is very, very high on my agenda.

As you are perhaps aware, we now spend more money on tail than we do on tooth, and we need to reverse this trend. Accordingly, you will see considerable effort within the Department of the Navy to improve the efficiency and effectiveness of our business practices. Senator Stevens, I do hope that it will be reflected in how well we control the cost of our programs as we go forward.

Regarding technology, Under Secretary Dr. Pete Aldridge testified that the science and technology (S&T) budget objectives should be in the range of 2.5 to 3 percent of the total of the Department of Defense (DOD) budget. I also support that goal for the Depart-

ment of the Navy. It is important that we invest in the future, so that will be one of our criteria as we go forward.

Finally, I would close with my very highest priority, namely our men and women in uniform, their families, and our civilian workforce. During confirmation hearings I commented that any capital asset purchased by the Department of the Navy, such as an aircraft carrier, has no asset value to the Nation, until it is manned by highly motivated and trained people, and then it becomes a very, very valuable asset.

Therefore, people are indeed our most important resource, and as we plan for the future we need to first be sure that our personnel policies will provide us the people and the skills we require for our future systems. So people are indeed our highest priority.

PREPARED STATEMENT

I look forward to working with each of you to meet the challenges ahead. I thank you for this opportunity to appear before you and for your continued dedicated support to the Naval services. Thank you very much. I do look forward to answering your questions along with Admiral Clark and the Commandant. Thank you, sir.

[The statement follows:]

PREPARED STATEMENT OF GORDON R. ENGLAND

Mr. Chairman, members of the Committee, good morning. Thank you for the opportunity to speak with you today. The CNO, Commandant and I are grateful for your continuing support to keep the Navy and Marine Corps the very best in the world.

President Bush, in his remarks at the Naval Academy graduation, said "we must build forces that draw upon the revolutionary advances in the technology of war that will allow us to keep the peace by redefining war on our terms—a force that is defined less by size and more by knowledge and swiftness . . . and that relies heavily on stealth, precision weaponry and information technologies." I am in full agreement with this challenge and, while naval forces inherently fit the President's vision, modifications and alignments will be needed to meet these goals.

For some time the sea services have undertaken an evolutionary shift from operations on the open seas to operations that include the littoral: an evolution that has underscored the requirement for improved data networking; battle management systems and sensors; and innovative ideas for employing Marines that are attuned to the difficult littoral environment—afloat and ashore. This shift in focus generates a need to look at our equipment across a broader mission range . . . such as time-critical strike, ballistic and cruise missile defense, anti-submarine warfare, and intelligence, surveillance, and reconnaissance (ISR), air and ground mobility platforms, and Expeditionary Maneuver Warfare.

We also recognize that we need to recapitalize our force . . . by that I mean building new platforms . . . for the future. For instance, even as the average age of our ships has been steadily increasing to its present average of 16 years—and trending upward for the next five or so years—our building rates have not been keeping apace. Likewise, the average age of Navy and Marine Corps aircraft is about 18 years . . . close to the age of those Sailors and Marines who maintain them. Here also building aircraft in sufficient numbers . . . ideally at economical orders of production . . . is called for.

We have precious few new programs to re-capitalize our forces other than systems like DDG 51, F/A–18E/F, and the new carrier under construction, USS RONALD REAGAN. In fact, projected replacement aircraft, such as the F/A–18 E/F and the Joint Strike Fighter do not meet the entire need, as there are no replacements scheduled for the EA–6B, P–3, or E–2 aircraft and some of our helicopter fleet. New funding will certainly be needed, but I also intend to identify some funding sources through process improvement.

To make the most of our Navy-Marine Corps team I intend to focus on four strategic areas: combat capability, people, technology, and business practices.

As this Committee is well aware, the primary purpose of the Navy and Marine Corps is to deter, train for, and when necessary, fight and win our Nation's battles.

In remaining faithful to this charge, combat capability, which includes readiness, must be our primary emphasis. In all our decision-making, we will ask the question, "Does this task, program, organization or facility materially contribute to improving our combat capability?" Likewise we will recognize that what has worked in the past may not always succeed in the future. Therefore, the Department will invest more in technical and doctrinal experimentation, and in new and different ways of accomplishing our mission. Let me emphasize, our mission is, and will remain, joint. We are committed to the concept "One Team, One Fight." Along with our sister services and allies, we will organize, equip and train to fight jointly, recognizing that forward deployed naval forces are integral to the combined efforts of all the armed services.

I would like to briefly address my very highest priority; namely, our men and women in uniform, their families and our civilian workforce. During my confirmation hearings, I commented that any capital asset purchased by the Department of the Navy has no asset value to the nation until it is manned by highly motivated and trained people. Therefore, as we plan for the future, we need to first be sure that our personnel policies will provide us the people and skills we require for our future systems.

In this regard, emphasis needs to be placed on "Quality of Service"—achieving a higher quality workplace as well as a higher quality of life for our Sailors, Marines, active duty and reserve, and civilians and all of their families. The goal will be to create an environment where our men and women can excel at their chosen profession, unimpeded by factors that divert their attention from work and sap their morale. This includes competitive compensation and quality housing, workplace resources, health care, training, and an operational tempo that considers the individual, as well as the family and community. Fostering a positive working environment where young men and women believe they contribute meaningfully to their units will encourage them to want to stay and grow with our team. When people want to stay with a group, others will want to join that group. Retention is a great recruiting tool!

Creating this environment requires attuned leadership throughout our command structure. I am talking about leadership that encourages information to flow freely up and down the organization, and that values the knowledge and expertise of the total force. Everyone in the Department of the Navy needs to recognize that while some positions carry greater responsibility, all of our people are equal and important. No one capable and willing to contribute will be discounted.

The application of advanced technology is central to our Nation's military strength. I am concerned, however, that the application of technology in the military has for a generation lagged its commercial availability. This is a high priority in our combat systems, but also includes technology for training, testing and management systems. Technological advances are central to the priorities set forth by the President and Secretary of Defense as we shift from the 20th century force, to the more lethal and agile one of the 21st. Technology will emphasize networks of information and communications as well as improvements in sensors and weapons. Care must be taken to plan for future advances and logical insertion points early in the design process. This preplanned improvement schedule combined with spiral design should allow for the delivery of increased combat capability over a shorter period of time. Also important, U.S. systems need to have designed into them conduits that allow our allies to participate to the best of their significant capabilities at increasing levels of complexity. It goes without saying that embarking on this technological transformation will necessitate we recruit, train, and retain bright and intelligent people to operate and maintain these systems.

Our management team should be more process-oriented, working on ways to improve "how we do business" rather than concentrating only on specific programs and products. To do that, we need to know where we are and to have clear visibility of where we are going. Measures and metrics provide the tools to do so and as such, will be a key element of our process-oriented management strategy. Our cold war acquisition infrastructure and regulations have been described as a "voracious dinosaur consuming dollars which should be applied to the real mission." It is time to change. Borrowing applicable business practices from commercial industry is a logical step. While the Navy and Marine Corps will always need good leaders in their primary combat arms arena, the Department of Navy will also develop leaders with a better understanding of business strategies, cost control and rapid and flexible design.

The world has changed a great deal over the past decade. But one thing, has not changed: the Navy and Marine Corps needs to deter, train for, and when necessary fight and win our Nation's battles. As we steam into this new century, I am reminded that forward presence provides an essential benefit for our nation. The Navy

and Marine Corps, and in fact the entire U.S. military, contribute to a stable global environment allowing our economy and our citizens to prosper along with other nations and peoples throughout the world. The stabilizing benefits of American military strength are key to our national interests and the well being of the international community. The investment by our nation in its military to underwrite this prosperity is, indeed quite modest.

I look forward to working with the Congress, the Secretary of Defense, and our sister Services to meet the challenges in the next year and beyond. The changes and transformations I have discussed constitute a new start at the beginning of the new century. Thank you for your time this morning and your continued support for our Sailors, Marines . . . active and reserve . . . our civilians and their families. The statements made in this testimony are contingent upon the results of Secretary Rumsfeld's strategic review. I ask that you consider them in that light.

BIOGRAPHICAL SKETCH OF GORDON R. ENGLAND

Mr. England was nominated on 24 April 2001 by President George W. Bush to serve as 72nd Secretary of Navy, and was sworn in on 24 May 2001.

Mr. England served as executive vice president of General Dynamics Corporation from 1997 until 2001 and was responsible for two major sectors of the corporation: Information Systems and International. Previously he had served as executive vice president of the Combat Systems Group, president of General Dynamics Fort Worth aircraft company and before that he served as president of General Dynamics Land Systems company producing land combat vehicles.

Mr. England began his career with Honeywell Corporation working as an engineer on the Gemini space program before joining General Dynamics (GD) in 1966 as an avionics design engineer in the Fort Worth aircraft division. He also worked as a program manager with Litton Industries on the Navy's E–2C Hawkeye aircraft.

Following various engineering and management positions with GD Fort Worth, Mr. England became president of GD Land Systems company. Shortly afterwards he returned to Fort Worth as president of that division and as executive vice president of the corporation in 1991. He served in these roles until 1993 when Lockheed Martin purchased the Fort Worth division after which he continued to serve as president of Lockheed's aircraft company from 1993 to 1995.

Mr. England established a mergers and acquisitions consulting firm following his retirement from Lockheed Martin in 1995 and operated that business until his selection as executive vice president of General Dynamics in 1997.

A native of Baltimore he graduated from the University of Maryland in 1961 with a bachelor's degree in electrical engineering. In 1975 he earned a master's degree in business administration from the M.J. Neeley School of Business at Texas Christian University. He is a member of the following honorary societies: Beta Gamma Sigma (business), Omicron Delta Kappa (leadership) and Eta Kappa Nu (Engineering).

Mr. England has served as a member of the Defense Science Board and as Vice Chairman of the National Research Council Committee on the Future of the U.S. Aerospace Industry. He has also been actively involved in a variety of civic and charitable organizations including Goodwill International where he served as vice chairman of the board of directors, the USO's board of governors, and as a member of the board of visitors at TCU and other universities.

He has received numerous professional and service awards from many organizations including the Boy Scouts of America, National Defense Industrial Association and the National Management Association. He was selected as an IEEE Centennial awardee and is a member of the Aviation Heritage Hall of Fame.

Senator INOUYE. Thank you very much, Mr. Secretary.

Admiral Clark, would you care to?

STATEMENT OF VERNON E. CLARK, CHIEF OF NAVAL OPERATIONS, U.S. NAVY

Admiral CLARK. Yes, sir. Good morning, Mr. Chairman and Senator Stevens and other members of the committee. I thank you for the opportunity to be here today and appear before you. Certainly I want to express my appreciation for the continued support of this committee in support of the young men and women who make our Navy what it is today.

Mr. Chairman, with your permission, I have submitted a written statement and I have a few brief comments.

Senator INOUYE. Without objection, your statement is made part of the record.

Admiral CLARK. Thank you.

Today we have the Kearsage Amphibious Ready Group in the Mediterranean (Med), we have the Boxer Amphibious Ready Group in the Red Sea, we have the Constellation Battle Group in the Arabian Gulf, and the Enterprise Battle Group in the Mediterranean getting ready to go relieve the Connie. Behind them, the Carl Vinson Battle Group out of the Northwest just completed her final exam and is getting ready to deploy. Her battle group commander was in to see me yesterday. The Theodore Roosevelt Battle Group is conducting training, getting ready to be the next rotational deployer headed toward the Med and then the Gulf. That is the way it goes. The beat continues.

Here, it has been alluded to already, inside the Beltway we are in the process of the defense review panels and the opening rounds of the Quadrennial Defense Review. While I cannot say with certainty all the things that will come out of that, it is very clear to me, Mr. Chairman, that when it is complete it will reaffirm that our Navy-Marine Corps team exists for one principal purpose and that is to project credible combat power to the far corners of the Earth, supporting the Nation, the kinds of things that the National Command Authority calls upon us to do, being ready to win in combat if we are called upon to do that, certainly being the force that can help assure access if we have to go to those far corners and engage in combat, dissuading and deterring potential adversaries, promoting regional stability, and so forth.

I would say that, you know, we look at where our Navy has been. We are 41 percent smaller than we were 10 years ago, but the demand on this force certainly is not less. Today, this morning, 96 of the 316 ships that we have in our Navy, 96 of them, 30 percent, are forward deployed in the far corners of the Earth. By the way, that is not a high number. It is oftentimes more than that.

Certainly our Navy faces serious fiscal challenges starting in 2001. Mr. Chairman and Senator Stevens, you have both alluded to them. I would just say that we have taken strong action to live within our means the best way we know how to in 2001. The approval of the requested supplemental appropriation is at a stage that we critically need that to continue operations.

Since I have been the Chief of Naval Operations (CNO)—and I complete 11 months today—manpower has been my top priority, number one on my top five list. Every place I go, I talk about being at war for people, being at war for talent. Certainly, to win this war we are engaging in a campaign plan on three fronts: recruiting the right people, retaining the right people, and attacking attrition.

The things that have been supported by this committee are helping us succeed: bonuses, pay table adjustments, retirement reforms, better medical for our people. I just want to report to you that all of those things and the focus that we have on it are having the desired impact. We are on track in 2001 on our recruitment and I would tell you that we are winning in improved retention and this is a good news story. It is a top priority for our Navy. We

have not won the war, but we are doing the right things and we are headed in the right directions. That said, we still have to do better, and the leadership of our Navy, your Navy, understands that.

We are also facing today, and we have had in the past, significant readiness issues. You all have alluded to them. Some of these issues are institutional in nature and we can talk about those in the course of the questions and answers. The issue that Secretary England raises, increased age of our force, is a key part of the increasing, in fact spiraling, operational and support costs to keep our Navy running today.

It has been said our aircraft age, the average age of our air force today in the Navy, is the oldest it has ever been in our history. The key challenge that I see is sustaining current readiness and investing in future key capabilities to make the future Navy what it has to be, and the Navy-Marine Corps team.

Certainly, in recent years current readiness has come at the expense of recapitalization and modernization. You have heard this story before, so that is not news. We have been buying insufficient numbers of ships and aircraft to make our future what it needs to be. So this is the major issue, the challenge that we face today, for the services and the Congress, coming to grips with the acquisition bow wave that we face and dealing with future risk for our forces.

One brief word about the infrastructure, if I might. I am encouraged by the position that has been taken by the President and by the Secretary of Defense and by Secretary England regarding the importance of our base structure. I often speak about quality of service. It is number four on my top five list. The two items included there include quality of life and quality of work. We talk about quality of life a lot, not so much about quality of work.

Too many of our people in our Navy live and work in facilities that are substandard. Much of the Navy's shore infrastructure today is in poor condition, and correcting this requires not just talking about excess infrastructure, which we have to do, and not just finding and trying to find innovative ways to satisfy infrastructure needs. That is required, but not just that. It is going to require from us a commitment that this is an important part of our working environment and that we are in fact going to make it right.

So, Mr. Chairman, members of the committee, the challenge of accomplishing all this today is significant, preparing for the future. As I come to this, this is the challenge of a lifetime. To meet it, we must embrace innovation, we must embrace experimentation, organizational efficiencies that Secretary England talked about. I just want to say that I am committed to doing exactly that.

PREPARED STATEMENT

I thank the committee for your continued, continuing support of our Navy and of our sailors and their families, and I look forward to responding to your questions.

[The statement follows:]

PREPARED STATEMENT OF VERNON E. CLARK

Mr. Chairman and members of the Committee, thank you for this opportunity to appear before you. I am grateful for your continuing support.

THE CONTEXT FOR NAVAL FORCES

The Navy's posture, programs, and character are largely shaped by the critical question: What does our nation expect its Navy to do? I believe the nation expects—as it has for much of our history—the Navy to project sovereign American power in support of national interests while forward-deployed to the far corners of the earth. The nation expects us to command the seas; provide on-scene, sustainable, combat-credible power to promote regional stability; dissuade potential adversaries; enhance deterrence; and—when needed—prevail decisively in combat.

Forward-deployed naval forces are central to the National Military Strategy and integral to regional Commander-in-Chief (CINC) plans for peacetime and combat operations. On any given day, one-third of our Navy is forward deployed, protecting command of the seas, ensuring the free flow of trade and resources, providing combat-ready presence, and assuring access for joint forces.

Our Navy is shaped by how we meet the national and regional requirements for forward forces. While some ships and squadrons are homeported overseas, most are deployed rotationally for periods of up to six months in an 18–24 month cycle. This construct drives the Navy's force structure.

While the requirement for forward-deployed, combat-capable naval forces has remained consistent since the end of the Cold War, assets available to meet that requirement have decreased markedly. Our force structure declined 41 percent since 1991, from 538 to 316 ships. Today, over 30 percent of our ships are forward deployed on average, compared with 21 percent ten years ago. Although deployed naval forces remain ready to respond, we no longer have excess capacity for operational flexibility or experimentation.

Some say emergent technologies have reduced the importance of forward-deployed forces, allowing us to effectively influence events without a robust in-theater presence. I do not believe this. In most cases, dissuading potential adversaries, deterring aggression, and quickly bringing combat power to bear require on-scene forces. Such presence is fundamental to providing sustained precision fires for joint forces, projecting defense over land, and assuring access. In short, we must remain ready to "climb into the ring" with an opponent and prevail.

PRIORITIES AND CHALLENGES

Upon becoming CNO nearly a year ago, I outlined my top five priorities, the areas of concern our Navy must address if we are to sustain readiness and prepare for the future. Today, I would like to update you on those priorities, including an assessment of our financial situation.

As you are aware, all of the Services face serious fiscal challenges in 2001. Early this year, I directed a reduction to our Flying Hour Program to mitigate funding shortfalls while maintaining minimum readiness levels for deploying forces. Additionally, the fleet commanders have been using Real Property Maintenance (RPM) funds to address rising utility costs, enhance force protection, meet emergent maintenance expenses, and pay other unforeseen bills.

While these measures avoided significant operational impact, receipt of requested supplemental appropriations is now critical. An Omnibus Reprogramming is also vital to supporting a number of other requirements. These actions, if fully supported by the Committees, will get us through the year. All requirements beyond the minimum needed to execute the remainder of fiscal year 2001 have been deferred to next fiscal year.

This is not the way we want to do business. To address this reoccurring problem, it is my intent to strengthen our requirements determination and budgeting processes. I am committed to working within the Department and with you to break this cycle of underfunding understated requirements and position us to execute future fiscal years without redress.

Manpower and Personnel

Navy men and women are our most valuable resource and we must provide them with the tools and leadership to excel. We are now—and will continue to be—in a "War for Talent" with other employers. To win this war, we are focusing on recruiting the right people, reducing attrition, and increasing reenlistments.

Improvements in compensation that you have supported—bonuses, pay table adjustments, retirement reforms, and better medical benefits—are having the desired impact. The Navy met its overall recruiting and end-strength goals in fiscal year 1999 and 2000, and we are on track for 2001. Officer and enlisted retention is edging upward, though we remain below steady-state goals. Particular areas of concern remain, such as our 1,300+ pilot shortage. We are currently reenlisting 60 percent of eligible Sailors who reach the end of their first enlistments, compared with 48

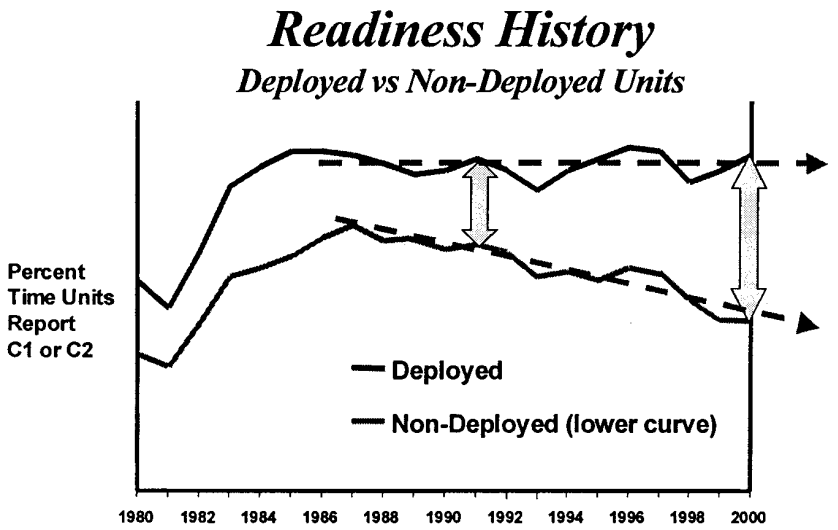
percent in 1999. Two-thirds of petty officers with 6–10 years of service are reenlisting, compared with 61 percent two years ago. Attrition rates are declining, but we still must do better.

As a result of improved retention in fiscal year 2001, we expect to begin fiscal year 2002 approximately 3,200 Sailors above our authorized end strength of 372,642, but within the one percent flexibility allowed by law. This additional strength has improved at-sea manning to the best level in years, reduced gapped billets by 16 percent, and enhanced Navy personnel readiness.

Looking ahead, two personnel issues concern me. First is the erosion in Career Sea Pay, last updated in 1986. Redress of this problem was authorized in the fiscal year 2001 National Defense Authorization Act (NDAA) but not funded. Second is the issue of ITEMPO. We are analyzing the implementation of ITEMPO legislation contained in the fiscal year 2000 and 2001 NDAAs, including potential funding and operational impacts. We will work closely with you and the authorizing committees as we address these issues.

Current Readiness

We are a Navy that has significant readiness shortfalls. While forward deployed naval forces are prepared to accomplish assigned missions, non-deployed forces are below satisfactory readiness levels, making it increasingly difficult to effectively prepare for upcoming deployments. Figure 1 shows the percentage of time deployed and non-deployed Navy units reported C1 or C2 in overall readiness during the last two decades. The gap between these two groups has widened significantly.



[FIGURE 1]

The increasing age of our equipment is a major factor contributing to this trend, mainly due to rising operating and support costs. Our aircraft fleet is now the oldest in naval aviation history (older on average than our ships). Increased utilization of repair parts has driven a 14 percent annual cost increase in this component of our Flying Hour Program. Many ships, including AUSTIN and ANCHORAGE-class amphibious ships, as well as our fleet command ships, are reaching the end of their service lives. These vital ships often require more repairs than planned for, forcing us to reschedule other ship maintenance periods.

To arrest these trends, it is imperative that we accurately budget readiness requirements in fiscal year 2002 and beyond, ending our reliance on supplemental appropriations. This includes correctly forecasting requirements such as force protection, utility costs, and precision guided munitions.

Future Readiness

Sustaining current readiness while investing in key future capabilities is a most difficult balancing act. In recent years, current readiness has come at the expense

of recapitalization and modernization. As a result, we have slowed modernization efforts in all but safety and near-term readiness-related programs.

Today, we face an acquisition "bow wave" for ships and aircraft. After completion of the Defense Department's strategy and force structure review, we will evaluate the Navy's modernization goals and determine the appropriate funding levels to procure aircraft, ships, and network-centric warfare capabilities, as well as conduct research and development to transform and upgrade the fleet.

I am fully committed to the F/A–18 E/F; the sooner we get it to the fleet, the sooner we can retire older aircraft. For that reason, we should procure the upper limit of the multi-year buy. The same is true of the V–22, once retrofit is complete. DD–21, CVNX, and JSF also present compelling technological leaps in warfighting capability and innovation.

The impact of the current low procurement rate goes beyond force levels. It adversely affects the stability of our unique defense industrial base. We are paying a premium in program cost because of production inefficiencies due to the lack of economies of scale. We need to pursue reform in acquisition and budgeting, which will allow us to better partner with industry and correct procurement shortfalls.

To ensure future readiness, we must adapt swiftly to emerging requirements and technological opportunities related to transformation. Such agility will be central to the success of our conceptual shift from platform-centric warfare to an emphasis on networked, distributed systems. The success of this shift will also rely on our commitment to vigorous technological and doctrinal experimentation, exploration that will help shape investment priorities in future years.

Quality of Service

A high Quality of Service is directly related to retaining and motivating Sailors. I define Quality of Service as a balanced combination of Quality of Life and Quality of Work. While we have achieved gains in Quality of Life programs, our Quality of Work requires substantial improvement in many areas.

In previous testimony, I noted that a "psychology of deficiency"—the acceptance of sustained resource shortages as a normal condition—has become ingrained in our operating forces. It is manifested in such things as substandard facilities and working environments. For example, much of the Navy's shore infrastructure is in poor condition because our recapitalization cycle exceeds 160 years, our backlog of maintenance and repair exceeds $5.5 billion, and our RPM funding is only about half of the private industry average.

Meeting this challenge requires reducing excess infrastructure and finding innovative ways to satisfy infrastructure needs. I am hopeful that fiscal year 2002 will represent a significant improvement in RPM and military construction accounts.

Alignment

Navy-wide alignment is critical to ensuring our organizations, systems, and processes deliver a combat-capable Navy ready to sail "in harm's way." To enhance communications and coordination, we realigned the OPNAV Staff and more fully integrated the fleets' requirements and training organizations. These changes will allow us to more accurately determine requirements, improve readiness, and maximize investment effectiveness.

CONCLUSION

I thank the Committee for your continued strong support of our Navy, our Sailors, and their families. Working together, I am confident that we can meet the challenges of current and future readiness, allowing the United States Navy to fulfill the missions fundamental to a more stable and peaceful world. The statements made in this testimony are contingent upon the results of Secretary Rumsfeld's strategic review. I ask that you consider them in that light.

Senator INOUYE. Thank you very much, Admiral.

General Jones.

STATEMENT OF GENERAL JAMES L. JONES, COMMANDANT OF THE MARINE CORPS, U.S. MARINE CORPS

General JONES. Mr. Chairman, thank you very much for the invitation to appear before you. Senator Stevens, members of the committee, I am delighted to appear to represent the United States Marines and their families. I would like to underscore the Secretary's comments and the CNO's opening remarks that reported

that the Navy and the Marine Corps are indeed one team. You see before you three leaders who are committed to working together to achieve great things for the Nation in terms of our naval forces, the people that wear the uniform, the civilians who work for us, and their families.

I am happy to tell you, Mr. Chairman and members of the committee, that in the Marine Corps you have an organization that has a very stable culture and a very clear purpose in mind of what it is about. Basically, we know what we are and we like what we do.

As evidence of that, for the past 6 years running, we have achieved our recruiting goals every single month in terms of quality and quantity. We recruit roughly 39,000 young men and women every single year. But the true test of cultural stability does not come from recruiting alone. It comes from looking at our retention figures. As we look at our retention figures, of our first-termers in the Marine Corps we are 95 percent complete for this year's goals and we were actually 90 percent complete with 6 months to go in this fiscal year.

We have a vision for our future that is basically expressed in both sea-and land-based expeditionary maneuver warfare. In order to round out the Nation's capabilities to project power, for 6 percent of our budget we provide about 20 percent of the expeditionary combat power available to the Nation and fully one-third of the active force ground combat logistics available to the United States.

But we still pay for readiness out of modernization and infrastructure. Forty-three percent of the Marine Corps' infrastructure is either C–3 or C–4. Thirty-five percent of our infrastructure is over 50 years old. Our backlog of maintenance and repairs is about $650 million and, though we have made some improvements, it is still a very, very important figure.

This past year, spiraling energy costs have affected our quality of life for our families and been a drain on our resources that we would otherwise have used for procurement and other things that we would like to do.

When you think of the Marine Corps, if you would think of it as an organization that is expeditionary by culture and transformational by design, I think you would have it about right. Words are very important in this context and I would like to discuss two sets of words with very important, but very different, meanings.

The first set is "expeditionary" versus "deployability." In this context, "expeditionary" means that you want to be able to get to wherever you need to get to fairly quickly and put investments up front so you can shape and affect the outcome for the desires of the Nation. In this context, speed is expensive. Too much speed, in other words the ability to deploy forces too fast and get them there too quickly, may result in them not being logistically sustainable. So when you invest in expeditionary forces you have to make sure of the totality of the investment.

Put another way, it is my belief that the Nation does not need all of its forces to be able to arrive at spot X or Y on the globe at the same time. The truth of the matter is we cannot afford it and we cannot lift it. So we ought to be able to understand that some of the forces will have to be truly expeditionary, some of them will

be ultimately follow-on forces and will be deployable, and that is important. But the two words have different meanings.

The second set of words I would like to just pause and discuss for a minute is "transformation" versus "modernization." In 1973 this country had a serious energy crisis. We called for transformational goals with regard to the auto industry to release our dependence on foreign oil and energy and the like, and we tried very quickly or very dramatically to transform our auto industry into either electric or solar-powered cars.

What we actually wound up doing is modernizing our cars. We made them fuel efficient, they have greater ranges. We adopted composite metals. We made them safer. So we wound up modernizing as opposed to transforming, although that is still a goal. But we stated transformational goals in 1973 and we really did achieve modernizational goals.

So when you think of those terms of "expeditionary" and "deployable" and "transformation" versus "modernization" in terms of the armed forces of the United States, we should remember that in the last 50 years we have moved forces about 300 times in response to a burgeoning or emergent crisis where our national interest may be affected. We have actually flowed follow-on forces forward six times, and we have actually fought major theater conflicts about three times.

Now, in the main when you look at that force utilization and you apply the notion of what is expeditionary versus deployable and what is transformed versus modernization, those definitions become important in how we use our forces. So we need both transformation and modernization, but perhaps not in the same amounts. We are likely to be more dependent on modernization than we are transformation, which is technology and science that may or may not come to pass when we want it, much like the transformation of our automotive industry.

For the Marine Corps, though, transformation and modernization means general convergence in a direction, on an axis, and all of these programs converge around 2008 at the current levels of investment. We are transformation by design, transformational by design.

As an example of transformational programs, let me just list a couple for you. Senator Stevens has already referred to one, but I believe that tilt rotor technology as a technology is transformational technology. It is not just about the V–22 as a military instrument. It is about an industrial base question of whether we can adopt this new technology to go from rotary wing aircraft to tilt rotors and what does that do for not only the military capability, but the industrial base.

I believe the Joint Strike Fighter is transformational. I believe the Advanced Amphibious Assault Vehicle (AAAV) also fits in that definition. They are not always just weapons systems. I think our integrated logistics concepts by which we lighten the footprint which supports our forward-based forces is transformational. Informational operations is transformational in a military sense, as are precision fires from our naval ships, which will replace the saturation bombardments that were relatively imprecise, but by virtue of

the shear mass were able to achieve our objectives in the twentieth century. So that is a transformational technology.

In modernization I would say the Marine Corps programs such as Lightweight 155, Landing Craft Air Cushion (LCAC) Service Life Extension Program (SLEP) program, the High Mobility Artillery Assault Vehicle (HIMARS), the modernization of our Cobras and Hueys, our 120 millimeter mortars program, the M–4 rifle, the Joint Tactical Radio, and the KC–130J's are all very important modernization components.

Mr. Chairman, I believe that our citizens expect that 50 years from now America will be a Nation of great influence, just as it is today. I believe that we understand how we got to where we are. Many of you were members of the greatest generation, are members of the greatest generation, and you know full well how we got to be where we are today.

I am optimistic that we can do this for our future generations if we understand why we invest in national security in peacetime so that we do not have to invest in wartime, if we understand that national security is not an independent stand-alone investment, if we understand that such an investment is the anchor, literally the anchor, that allows our Nation to be the Nation of global influence, economically, politically and diplomatically, culturally, scientifically and technologically, which are really the pillars that make us different from any nation in the world.

As I have testified before, it is now I think abundantly clear that 2.9 cents on the dollar for a global superpower is not adequate. Whatever the Congress and the administration decides the future investment should be, I respectfully recommend that it be sustained over a reasonable period of time.

I am excited by the prospect of working with Secretary England and Secretary Rumsfeld and the new team with the Pentagon, a team that brings unqualified expertise in two areas that critically need to be addressed by the Department of Defense. One is bringing better business practices to the Pentagon and the second much-needed acquisition reforms. I am very encouraged by the public pronouncements of our new team of civilian leaders in that context.

As a matter of fact, I might say that the United States Marine Corps is running the largest activity-based costing management program in DOD right now and perhaps even in the entire government.

Our budget request is designed with transformation and modernization in mind. It balances what is truly expeditionary versus what is deployable. It has convergence in 2008. I previously testified that for approximately $2 billion you can achieve that, over and above that 6 percent that we are normally allocated, you can achieve, you can move that convergence up before 2008 in many of the programs that I listed earlier.

Inclusive in this total is modernization of our base housing and recapitalization of our entire infrastructure. We have a path for success if we continue to develop our foundational needs. For me that means an acquisition of Blount Island by 2004, which is a national asset in my judgment. It is our national logistics gateway for maritime power projection if we pay serious attention to the 3.0 Marine Expeditionary Brigade (MEB) lift requirement that we

have not filled in recent years. I firmly believe that I see a future where forward land bases on the global playing field will probably be fewer rather than more numerous in the years ahead. That to me drives us to some conclusions with regard to naval forces that we should discuss.

I think maritime prepositioned forces of the future will explore rapid sealift. I believe that, with regard to our fixed land bases, we should pay a lot of attention to the rise of encroachment issues, which are going to dominate the landscape both here and abroad in the next few years.

Our new Secretary of Defense has said that we should only replace things if you have something better to replace them with. I completely agree with that statement and I think we need to understand those things that we already have that will carry us into the future.

The rapidly deployable force with staying power that some have said is nonexistent with regard to land forces, does exist. It is the Marine Expeditionary Brigade. It is both expeditionary and deployable, and it is being modernized and it will be transformed, in part or maybe even in whole between now and 2008.

We have that today in the naval context. We have the capability of forcible entry. It is affordable in that it is bought and paid for up front. It is scalable. It is forward-based and deployed. It is sustainable. It is joint and operable, and it is combined arms capable without peer anywhere in the world, and I make that statement without any fear of contradiction.

PREPARED STATEMENT

As a final thought, it is an exciting time to be a member of the naval service. It is a great time to be a Marine. We look forward to our future, while learning from the past. I am deeply honored to be here and I look forward to answering your questions. Thank you.

[The statement follows:]

PREPARED STATEMENT OF JAMES L. JONES

Chairman Inouye, Senator Stevens, distinguished members of the Committee; it is my pleasure to report to you on the state of your Marine Corps. On behalf of all Marines and their families, I want to thank the Committee for its continued support. Your efforts to increase compensation and improve the quality of life of our young men and women in uniform have been central to the health of your Marine Corps and are deeply appreciated.

VISION

I believe the committee is well familiar with the nature of the present international security landscape and the current state of our forces, so I will begin simply by noting some of the ways in which warfare has changed in the 21st Century. In the 20th Century, mass and volume were the primary methods relied upon to win wars. In their place, speed, stealth, precision, and sustainment have become the emergent principles of modern warfare.

These four principles have application from the strategic to the tactical levels. Furthermore, they are key with regard to how our forces maneuver and employ weapons as well as to how they exchange information and logistically sustain themselves. The Marine Corps' vision, accordingly, is to inculcate these principles into our doctrine, organization, training, equipment, and support. One indication of our commitment to do this, reflected in Marine Corps Strategy 21, is our concerted aim to enhance the strategic agility, operational reach, and tactical flexibility of our Ma-

rine Air-Ground Task Forces. Speed, stealth, precision, and sustainment are integral to each of these capabilities.

Indeed, we are revolutionizing our approach to operations with these 21st Century principles of war in mind. We are moving beyond the traditional amphibious assault operations which we conducted in the 20th Century. Our goal now is advanced, expeditionary operations from land and sea to both deter and respond to crises.

The Corps has been our nation's premier expeditionary force since our landing at Nassau in the Bahamas, two hundred and twenty-five years ago. To Marines, the term "expeditionary" connotes more than a given capability. For us, it is a cultural mindset that conditions our Marines to be able to rapidly deploy with little advance warning and effectively operate, indefinitely, with organic logistical support in an austere environment. The Marine Corps' culture reflects that expectation, and the acknowledgement of the necessity to do more with less and to be prepared to fight and win with only the resources we bring with us. We have the flexibility to shift focus rapidly, from one mission to an entirely different one, without the need to return to fixed bases for refitting or retraining. In turn, we have worldwide responsiveness and the versatility to undertake missions across the spectrum of operations.

A prime example of these attributes is resident within our medium weight Marine Expeditionary Brigade (MEB). Nearly ten years ago, in light of pressing manpower considerations, we deactivated our six standing brigade command elements. Last year, we reestablished three Marine Expeditionary Brigades by embedding their staffs within our Marine Expeditionary Force headquarters. These units are now actively operating. The 1st MEB recently participated in NATIVE FURY, a humanitarian assistance operation in Kenya, and 2d MEB completed a Maritime Prepositioning Squadron offload exercise, DYNAMIC MIX, in Greece.

The versatility of the MEB is emblematic of the unique scalability of our Marine Air-Ground Task Forces. In size and capability, these brigades are midway between our Marine Expeditionary Units and our Marine Expeditionary Forces. Furthermore, our MEBs can either deploy on amphibious shipping or be airlifted into a theater of operations and join up with Maritime Prepositioning Forces.

A special characteristic of our MAGTFs is that they consist of five integrated elements: command; ground combat; aviation; logistics; and, supporting establishment. The MEB consists of a regimental landing team, with organic infantry, artillery, and armor elements, and in addition to a composite aircraft group with both fixed-wing and rotary-wing aircraft, it also has a combat service support group—whose supplies can sustain the MEB in full scale combat for thirty days. Each of these elements reinforces the others. This teamwork, built on training and experience, reaches across every battlefield function, creating a unique degree of synergy that distinguishes our units from others.

Ultimately, our vision of the future and our expeditionary culture, along with our philosophy of maneuver warfare, come together in our emerging capstone concept, Expeditionary Maneuver Warfare. Achieving the full promise of that concept will hinge on our efforts to balance the competing demands of near-term readiness and investment in equipment modernization and infrastructure. This is no small task. These over-arching concerns are interrelated and in the long-term we cannot have one without the others.

In order to improve our near-term readiness, we have made significant internal adjustments over the past two years. Through reduction in attrition of our first term Marines, internal management efficiencies, outsourcing, and privatization, we will eventually return over 3,000 Marines to the operating forces. We are also utilizing numerous best business practices to make our operations both efficient and effective and now have the largest Activity-Based Costing/Management program in the Department of Defense, if not all of government. While these efforts have improved the efficient application of fiscal and manpower resources, and directly supported our commitment to personnel readiness in the operating forces, we are still assessing the totality of our personnel requirement. Should a need for additional personnel be determined, we are confident that commensurate funding and our continued recruiting and retention successes will support any required increase.

Despite such supports, we are, regrettably, continuing to maintain our near-term readiness at the expense of our future readiness. As a result of the Defense Reviews of the past decade, the nation has consistently limited the resources dedicated to its security. Consequently, the dramatic increases in operational requirements coupled with topline constraints over the last several years have mandated a substantively reduced rate of investment in equipment modernization and infrastructure. We are, in fact, at a point where failure to rectify those shortfalls can no longer be neglected. As a nation with global responsibilities, we cannot ignore the critical importance of readiness.

READINESS

We assess our readiness in terms of "four pillars:" Marines and their families; our infrastructure; our legacy equipment systems; and, our modernization efforts. Each of these pillars requires attention and resources in order to ensure your Corps is prepared to serve our nation's interests. I will discuss each of the pillars and comment on what we are currently doing and what we want to do with the support of this committee, beginning with the most important part of the Marine Corps, its people.

Our Marines and Their Families

The Marine Corps has three major goals: making America's Marines; winning our nation's battles; and, creating quality citizens. The fact that people are the focus of two of these three goals exemplifies the extent to which we recognize the special trust and confidence that the nation reposes in us for the care and welfare of the young men and women in our charge.

Safety is central to the Corps' focus on people and it is a critical component of maintaining our readiness. It is also a vital element of the quality of life that we provide our Marines and their families. Along these lines, I am pleased to report that we have significantly lowered our off-duty mishap rates. Moreover, we have had notable success in aviation safety: our Class "A" flight mishap rate is the lowest it has ever been at this point in the fiscal year. For these trends to continue, it will take our unrelenting attention and we are dedicated to maintaining our focus on this important issue.

One factor contributing to our safety challenge is that we are a young force. The average age of our Marines is twenty-three, roughly seven to nine years younger than the average age of the members of the other services. This is part of the culture of the Corps inasmuch as our unique force structure results in over two-thirds of our Marines being in their first enlistment. The nature of our force structure requires us to annually recruit more men and women into our enlisted ranks than does the Air Force, for example. To fulfill this tremendous demand, our recruiters work tirelessly and have met our accession goals in quality and quantity for nearly six years.

Retention is equally as important as recruiting, and we are proud that we are meeting our retention goals across nearly all military occupational specialties. Intangibles—such as the desire to serve our nation, to belong to a cohesive organization, and to embrace leadership responsibilities satisfied by service in the Corps—are a large part of the reason we retain the remarkable men and women who choose to continue to be Marines after their initial commitment. Concrete evidence of this phenomena is seen in our deployed units, which continually record the highest reenlistment rates in the Corps. Retention success is also partly a consequence of the investment we make in supporting our operational forces—to give our Marines what they need to do their jobs in the field when they are deployed—as well as the funds we earmark for educating and training our Marines.

Moreover, while we recruit Marines, we retain families. Your support of our families' quality of life has contributed greatly to our retention success. As noted earlier, the effectiveness of our Marines is dependent, in large measure, on the support they receive from their loved ones. Our families are indeed vital to our readiness. Increased pay as well as improved housing and health care directly influence our families' quality of life and, in turn, bolster the readiness of our units.

Our Infrastructure

Beyond providing for our families, your support in allocating and sustaining resources for our bases and stations has had a profound impact on our readiness. Bases and stations are the launching pads and recovery platforms for our deployed units and thus are integral parts of our operating forces. Hence, we want to ensure that our posts possess the infrastructure and ranges necessary to prepare our Marines for the wide variety of contingencies they can expect to confront. Equally important, they are sanctuaries for many of our families. Moreover, just as our bases and stations are vital to our current readiness, the recapitalization of our infrastructure is as important to our warfighting strength in the future as is modernization.

Increasingly, the many forms of encroachment threaten to degrade our readiness. When most of our bases and stations were established, they were distant from civilian population centers. Today, population growth and commercial development have not merely reached our installations, they have enveloped them. There are two major ramifications of this phenomenon. The first is that our bases and stations often are the last remaining wilderness zones in otherwise over-developed areas—which has meant that we have to balance our training requirements with our increasing responsibilities as environmental stewards. The second consequence is that

we are now obliged to routinely deal with a wide variety of complaints, often regarding noise or flight patterns from citizens who now live in proximity to our bases and stations.

Such concerns about sea, land, and airspace utilization have necessitated close coordination and frequent compromise with many elements of the civilian sector. Accordingly, we work diligently to be good neighbors and try to accommodate the demands of environmental protection and concerns of adjoining communities without degrading training and the mission effectiveness of our Marines. Despite this focus, encroachment issues have the potential to increasingly affect readiness in the years ahead. We need your continued support to ensure that the growing complexity and expense of encroachment issues do not hamstring our efforts to conduct meaningful training in order to provide for national security.

Our Legacy Equipment Systems

Our present and future readiness do not rest solely on the investments we make in our personnel and infrastructure. We also must consider the equipment we give our Marines. This is no simple task. We must apportion our allotted resources between maintaining the ability to respond to crises and the requirement to lay the foundation for our capacity to respond to the security challenges of the future.

As a consequence of the procurement pause of the 1990s, many of our weapons, vehicles, aircraft, and support systems are approaching block obsolescence. In the last decade, we have watched the size of our forces decline while the number of contingencies has increased. Under these circumstances, our equipment has been put under tremendous stress. Marines are spending ever-increasing amounts of time conducting preventive and corrective maintenance. Moreover, we are spending more and more money on spare parts to repair our legacy equipment. The limited availability of spare parts has put additional strain on these efforts. Our procurement programs seek to address this concern, but we are acutely aware that the acquisition process is often a slow enterprise. As a result, our legacy equipment systems and our efforts to maintain them will remain central to the readiness of our Marine Air-Ground Task Forces until our modernization programs replace those aging pieces of equipment.

MODERNIZATION

We recognize that we cannot know for certain what missions and threats we will face in the future, and that, as a result, we need to hedge our modernization programs in such a way as to provide America with weapons platforms that are flexible and robust enough to allow her Marines to excel across the wide spectrum of tasks and environments that they may encounter. The Marine Corps looks to the Advanced Amphibious Assault Vehicle, V–22 Osprey, Joint Strike Fighter, KC–130J, Lightweight 155mm Howitzer, High Mobility Artillery Rocket System, Medium Tactical Vehicle Replacement, Naval Precision Fires, and increased amphibious shipping, among other systems, to give us the versatility that we will need in the decades to come.

Advanced Amphibious Assault Vehicle

The award winning Advanced Amphibious Assault Vehicle program is the Corps' highest ground acquisition priority and promises to allow high-speed surface maneuver from ship-to-shore as well as on land. Importantly, these vehicles will be able to deploy to their objectives from over the visual horizon, which will allow our ships to remain beyond the range of many threat weapons and surveillance systems. This capability will help negate an enemy's anti-access strategies and enable expeditionary operations from the sea.

V–22 Osprey

The Osprey remains the Corps' premier near-term aviation acquisition priority. Tiltrotor technology promises to revolutionize aviation and the V–22 will radically increase our strategic airlift, operational reach, and tactical flexibility. The Osprey's superior range, speed, and payload will allow us to accomplish combat missions and other operations from distances previously unattainable and at faster response times than possible with other airframes.

We are acutely aware of the challenges associated with the Osprey but are gratified that the Review Panel, appointed by then-Secretary of Defense William Cohen, concluded that tiltrotor technology is mature and that, though the aircraft's reliability and maintainability must be improved, the V–22 is cost-effective and provides the Marine Corps with capabilities that cannot be provided by any single helicopter or conventional aircraft. Indeed, the Panel's conclusions mirror those of seven

major cost and operational effectiveness analyses and the fact that the tiltrotor XV–15 has been flying since 1977.

We are presently in the process of ensuring that the V–22 is reliable, operationally suitable, and affordable—just as we did forty years ago with each of the aircraft the Osprey is intended to replace. Currently, 85 reliability and maintainability improvements have been incorporated, or are on contract for incorporation, on the Osprey's production line—out of the 120 identified. With time, diligence, the close cooperation of our partners in industry, and with the support of the Congress, we can work through the present challenges confronting us and achieve the tremendous operational capabilities offered by this remarkable aircraft.

As has always been the case, our actions will be guided by an unyielding commitment to do what is right for our Marines, their families, and our nation. In asking for your support, I assure you that we will not compromise our integrity or jeopardize the safety of our Marines for any program.

Joint Strike Fighter

Another aviation modernization effort of great importance is the Joint Strike Fighter. The Joint Strike Fighter is, first and foremost, a product of Congressional guidance from the 1980s. At the time, all of the services routinely produced a large number of different airframes. Congress, therefore, asked the Department of Defense and industry to develop airframes that could be used in common by the services. The Joint Strike Fighter is the first step in that direction. The Short Takeoff and Vertical Landing variant promises to combine the current basing flexibility of the AV–8 Harrier with the multi-role capabilities, speed, and maneuverability of the F/A–18 Hornet to fulfill both the Marine Corps' air-to-ground and air-to-air mission requirements, as well as incorporate both stealth and standoff precision guided weapon technology. Just as the Joint Strike Fighter has incredible operational potential, it also holds remarkable promise for our industrial base and our nation's economy. Considering the fact that many of our allies have expressed interest in becoming partners in the program, the aircraft has the potential to bolster our defense industrial base to a degree similar to that achieved by the F–16 Fighting Falcon over the past twenty-five years.

KC–130J

Replacement of our aging KC–130 fleet with KC–130J aircraft is necessary to ensure the viability and deployability of Marine Corps Tactical Air and Assault Support well into the 21st Century. The KC–130J's performance features include increased cruise airspeed, night vision compatible interior and exterior lighting, enhanced rapid ground refueling capability, digital avionics, and powerful propulsion systems. These strengths promise lower life-cycle expenses and eliminate the need for costly KC–130F/R Service Life Extension Programs. With the KC–130J, our aerial refueling fleet will be ready to support the tremendous increase in capabilities that the Osprey and the Joint Strike Fighter promise to provide for our Marine Air-Ground Task Forces.

Lightweight 155mm Howitzer

A number of ground weapon system programs are also of great interest to us. The Lightweight 155mm Howitzer is our first priority in this regard. The Lightweight 155 is a joint Marine-Army program that meets or exceeds all the requirements of the current M198 Howitzer while reducing the weight of an individual artillery piece from 16,000 to 9,000 pounds. This lower weight allows for tactical lift by both the CH–53E Sea Stallion helicopter and the V–22. Moreover, the digitization of this platform will greatly reduce response time and increase accuracy. The program's Engineering Manufacturing Development phase is scheduled to be complete this summer and we plan to begin production in fiscal year 2002.

High Mobility Artillery Rocket System

Also integral to our plans to improve our fire support is the acquisition of the High Mobility Artillery Rocket System (HIMARS). This system is designed to be rapidly deployable as a key part of our expeditionary operations. It will fire both precision and area munitions, as well as extend our ground-based fire support umbrella to 45 kilometers. HIMARS's tactical mobility, small logistics footprint, and capacity to deliver heavy volume fires against time-sensitive targets will, in conjunction with the Lightweight 155, at last remedy the fire support shortfall we have known for much of the last two decades.

Medium Tactical Vehicle Replacement

The Medium Tactical Vehicle Replacement is at the heart of Combat Service Support modernization and will provide our forces improved sustainment and permit

maximum flexibility in responding to crises. The vehicle's weight and height allow it to be transported internally by the KC–130 Hercules aircraft and externally by the CH–53E Sea Stallion helicopter. The Medium Tactical Vehicle Replacement can readily negotiate terrain twice as rough as our current vehicles can, and it has increased payload, speed, and reliability.

Naval Precision Fires

Marine Corps expeditionary capabilities are intrinsically linked to our partners, the U.S. Navy. One illustration of this, among many, is that Naval precision fires are an essential dimension of our power projection capabilities. Yet, today the available resources for Naval fire support are sorely limited. Efforts to upgrade current naval surface fires capabilities are focused on modifications to the existing Mark 45 gun mount as well as the development of an advanced gun system, extended range guided munitions, and the Land Attack Standard Missile. The future of naval precision fires is represented by the Zumwalt class DD–21 Land-Attack Destroyer and the development of an extended range missile system. Taken together, these planned enhancements will dramatically improve the range, responsiveness, accuracy, and lethality of the Naval Surface Fire Support provided to forces ashore.

Amphibious Shipping

Our forward-based presence around the globe is becoming increasingly constrained while threats to force protection grow. As a result, America's operations are less and less likely to rely on large fixed bases overseas for deployment or sustainment. Accordingly, in most cases of crisis prevention or crisis response, U.S. forces are going to deploy and sustain operations either from our ships or our homeland.

Projecting power from the Continental United States, however, has substantive limitations. It is, in fact, myopic to think we can deter or defeat aggression overseas solely with capabilities based here in the United States. It is going to take presence in the operating area—more accurately, it is going to take a sea-based presence in the operating area, a formation of joint assets that together project and sustain combat power ashore while reducing or eliminating our landward footprint. Nonetheless, the United States Navy's fleet of ships has shrunk by nearly 40 percent of what it was a decade ago, despite the fact that the enduring requirements of global sea control, strategic deterrence, naval forward presence, and maritime power projection have not declined. Similarly, our amphibious fleet, which has been chronically under-resourced, remains the linchpin of the Corps' ability to shape the international security landscape, project power, and respond to crises.

We are grateful for your support to replace four classes of older ships with the new LPD 17 San Antonio amphibious ship class. The delivery of these twelve ships to the fleet is programmed to be complete at the end of the decade. Unfortunately, such an extended time-frame for ship design, construction, and delivery is typical and underscores the critical importance of ensuring now that we are ready to replace the LHD Wasp class ships when they reach the end of their 35 year service life starting in 2011.

Today's amphibious ship force structure, when the number of active fleet vessels is combined with reserve ships that can be mobilized, has the capacity to lift nearly two and a half Marine Expeditionary Brigade assault echelon equivalents. Several formal studies have concluded that the actual requirement is an amphibious ship force structure capable of lifting three Marine Expeditionary Brigade assault echelon equivalents in order to satisfy all forward presence requirements while maintaining the flexibility to deal with the unexpected.

Additionally, our current fleet of maritime prepositioning ships will require replacement in the 2020 timeframe. The development of advanced maritime prepositioning capabilities will incredibly advance the strength and flexibility of our sea-based expeditionary operations. The marriage of a modern amphibious fleet with maritime prepositioning shipping capable of hosting at-sea arrival and assembly of forces will eliminate the requirement for access to secure ports and airfields, and give our nation an unmatched asymmetrical advantage in projecting power.

Convergence

Looking ahead, the programs we have planned will, with your support, begin to converge in our operating forces in 2008. In the not distant future, the Advanced Amphibious Assault Vehicle, V–22 Osprey, Joint Strike Fighter, KC–130J, Lightweight 155, High Mobility Artillery Rocket System, Medium Tactical Vehicle Replacement, Naval Surface Fire Support, amphibious shipping, and a number of other smaller programs will together dramatically transform our expeditionary capabilities. As discussed earlier, these systems promise to embody speed, stealth, precision, and sustainment as well as afford us modern agility, mobility, and lethality.

But, we cannot stop here. We must work together with the Navy and our defense industrial base to exploit other opportunities to advance our capabilities in the future. Continuous modernization is key to our long-term national interest because without it, we will fail to keep pace with change. The Corps has an institutional tradition of such innovation. Inasmuch as we are expeditionary by nature, we are transformational by design. Indeed, we have long viewed transformation as an evolutionary process, not a singular event.

TRAINING AND EDUCATION

People, not systems, are the fundamental component of the Corps. Just as we are continually striving to evolve our doctrine, equipment, and supporting establishment so that we can better win our nation's battles, we are also constantly moving forward to improve how we train and educate our Marines.

We believe the old adage, "you fight the way you train." Because of this, our training exercises are becoming ever more Joint and Combined in order to provide our Marines with the experience that they will need when they are called upon to respond to crises—because there is no doubt that they will work alongside our sister services and partners from other nations in such circumstances. Moreover, we recognize that while our first duty is to be ready to win our nation's battles, we are increasingly called on to execute missions at the lower end of the spectrum of operations. Accordingly, our exercise scenarios emphasize both conventional warfighting missions as well as operations other than war.

Experience in tandem with education is the best foundation for dealing with both difficulty and fortuity. Accordingly, we are not only focused on training our Marines, but on educating them as well. We have expanded our distance learning programs to ensure that greater numbers of Marines have the opportunity for education, not merely those who attend resident courses. In light of this, we are adjusting administrative policies to accommodate family concerns—such as spouses with careers or children with exceptional needs—when selecting officers to attend our various schools that require a change in duty station. Moreover, we have instituted a year-out program for our junior officers that places them within the corporate world, think-tanks, and the Congress, in order to widen their perspectives.

OUR MARINE WARRIOR CULTURE

At the very heart of the Corps and its relationship to each Marine is our service culture. The Marine Corps is sui generis—that is, we have a nature that is distinct from all others. This goes beyond the unique characteristics of our expeditionary Marine Air-Ground Task Forces which are always prepared to be deployed overseas. It, in fact, pertains to our warrior ethos. From the individual Marine to our institution as a whole, our model is the thinking and stoic warrior who fights smarter than his enemy and is inured to hardship.

Our commitment to maintaining our warrior culture is illustrated by our recently instituted martial arts program. We have developed a discipline unique to the Corps and are in the process of training every Marine in its ways. This program seeks to promote both physical prowess and mental discipline. Different levels of achievement are rewarded with belts and reflect a combination of demonstrated character, judgment, and physical skill. This training will benefit Marines across the panoply of missions we face; especially in peacekeeping operations where physical strength and mental discipline are vital to such things as crowd control. Furthermore, our martial arts training is fundamentally concerned with mentoring our young men and women to understand that the key to mission accomplishment often is a matter of using intelligence, strength, and self-control to influence circumstances, rather than always resorting to the simple application of brute force.

I would like to note that each of the United States' Armed Services has a different set of responsibilities legislated by Congress under Title 10. The services have separate operating roles and institutional structures, just as corporations are not carbon copies of one another. Indeed, cultural diversity is a force multiplier. Consequently, "one-size fits all" standards are often not the best solutions in the Department of Defense, despite the importance of our on-going work to be fully joint in the conduct of operations. Therefore, it is important to understand how the differences between the services may require separate and service-specific means of accomplishing universal goals such as promoting the quality of life of our people.

The recently enacted PersTempo Program is an example of a requirement that is likely to impact each of the services differently. The 2001 National Defense Authorization Act mandated that any service member deployed more than 400 days in two years receive $100 for each additional deployment day. While the larger services may be capable of managing the restriction placed on deployments and the addi-

tional costs associated with this requirement, the policy runs counter to the Corps' rotationally deployed, expeditionary force identity as well as our limited budget.

Our young men and women join the Corps to make a difference, to challenge themselves, and are prepared to deploy in service of our country. The testament to this is our success in recruiting and retention: the "acid-test" of any service culture. Our young Marines and their families understand that our forward presence and expeditionary deployments are the core expression of our warrior culture. It is why they are Marines. And, in turn, though the PersTempo Program may be appropriate for the other services, its present construct does not comport with the Corps' culture and missions, and is likely in the long run to have a profoundly deleterious effect on our cohesion and on our ability to conduct operations and training.

CONCLUSION

Looking at the Corps overall, I think one of the clearest indicators that our people are our first priority is that presently sixty percent of our budget is allotted to funding our manpower. Yet, this fact also emphasizes the relative state of the other pillars of readiness, especially modernization; which has been shortchanged for most of the past decade. The Marine Corps has long prided itself on its ability to do more with less. Nothing reflects this more clearly than the fact that the Corps provides twenty percent of our nation's ground and aviation combat force with just six percent of the Department of Defense budget.

Just as the other services have pursued plans to reorganize from a Cold War posture to one that matches the post-Cold War world, the Corps, too, has adapted itself to the challenges and opportunities that have emerged during the last ten years. But, inasmuch as we are in what future historians may call "the expeditionary age," I want to underscore that the Marine Corps has always been and will continue to be our nation's premier expeditionary force. That identity is central to who we are as Marines.

With that firmly in mind, the Corps has carefully plotted a course for the future. Indeed, if the programs we have currently planned are properly funded, we will see a convergence of leap-ahead capabilities in our Marine Air-Ground Task Forces by the end of this decade that will revolutionize our expeditionary operations.

Our nation's current strategy and force structure may change in light of the many reviews initialized by Secretary of Defense Rumsfeld. Yet, only a sustained increase in resources will yield the operational strength, flexibility, and resilience we envision in both the short and the long-term. As I have testified in the past, an increased investment by this Committee, the Congress, and the American people, of approximately $1.8 to $2 billion a year sustained for the next eight to ten years—a modest step that is less than one percent of what is allotted to the overarching national security budget—will permit us to fulfill our vision and ensure that the Corps continues to defend America's far-flung national security interests, now and in the future. Such an investment addresses our warfighting readiness requirements, accelerates the pace of our modernization, and recapitalizes our infrastructure. This, in fact, is our transformation. With your consistent support we can achieve our goals and provide our Marines with a Corps that, by 2008, will be well on the road to dramatically transformed expeditionary capabilities.

DD–21

Senator INOUYE. I thank you very much, General.

Mr. Secretary, I will forgo asking questions on the V–22 Osprey because of the important role Chairman Stevens has played in the development of this program. But I would like to ask a question on the DD–21, which has been touted as the ship of the future. I note that the contract award has been delayed awaiting the Secretary's review and the QDR. Can you give us some hint as to where we are now? Has a decision been made?

Mr. ENGLAND. Mr. Chairman, with your permission I would like to defer that question to Admiral Clark. I have recused myself from those discussions, so I have not been involved in DD–21 and will not be for some time. So with your permission I would like to have Admiral Clark address that, please.

Senator INOUYE. All right, sir. Admiral Clark.

Admiral CLARK. Mr. Chairman, of course this activity is by law the responsibility of the acquisition executive is not here. But I am happy to speak to this issue with the understanding that I have of the sequence of events and where we stand. We have and I have testified that we need the capability that DD–21 brings to the Navy.

General Jones talked about transformational issues. There are transformational pieces in DD–21. The technology that comes with the integrated power system is not just modernizing a new ship just like ones we have built in the past. The incredible steps to inject manpower savings into the platform, very important. A number of things that—we could talk about the benefits of DD–21, but that is not really your question.

Your question is where are we in the process. I believe that the decision made by the acquisition executive was the correct decision, and that was to not step forward and do a down-select at a time when so much review is going on about the future of the entire military, not just the Navy-Marine Corps team; and that with these reviews ongoing and with the QDR not just in the opening rounds but ongoing, with ends in sight in the very near future, this was the right step to take.

The question about how long will it be before the Navy has a clear direction ahead, I think that it would be appropriate for us to respond to you for the record on that and the acquisition executive state his case. But it is clear that the real time line is tied to these other events that I have mentioned. Now we are not talking about months and months and months. We are talking about weeks to a couple of months, and it is my understanding that that is where we are in the process, Mr. Chairman.

Senator INOUYE. Assuming that it moves along according to the timetable, is there a role for the DD–21 in missile defense?

Admiral CLARK. Well, one of the potential longer term solutions is—DD–21 is not a missile defense ship in and of itself when you talk about—I mean, it is going to have great capability. But early in the development process it was talked about this perhaps being a transitional ship to a CG–21 at some point in the future. That is not under contract. That is not part of this development process, but it is easy for me to see that that could some day be a reality.

What I would say, Mr. Chairman, is this, is that the technology that is part of the DD–21 development is technology that we need in our future Navy. So it seems to me that it is a natural thing for us to consider, in fact it would be very unwise for us not to consider, the potential for such a solution in the future.

Senator INOUYE. Thank you.

JOINT STRIKE FIGHTER

Mr. Secretary, another matter on the Joint Strike Fighter (JSF). We have had press reports suggesting that a decision has been made. Has this decision been made?

Mr. ENGLAND. No, sir, not to my knowledge.

Senator INOUYE. Do you believe that the Joint Strike Fighter is affordable with other priorities on F–18/E and F and V–22?

Mr. ENGLAND. Yes, sir. I believe that the JSF is a very, very important platform, not just for the Navy but for the Nation, sir. I

know that Senator Stevens just returned from the Paris Air Show. My own experience is that the United States has been preeminent in aviation since the dawn of aviation. Frankly, we have started to lose that preeminence in the commercial sector. We have been targeted, I believe, particularly by the Europeans in our military sector. It is very, very important that we remain dominant in this technology. It is important from a military sense, but it is also very important from a civilian technology point of view to be preeminent.

It is important in my judgment to our naval services. It does provide us a long-range stealth platform that would augment our F–18E/Fs, and of course is critical to the United States Marine Corps. So this is a very important program and we will work very, very hard to find a way to make sure it fits within our budget. If anything, I would like to accelerate that program based on the briefings I have had to date.

Senator INOUYE. General, the Secretary just said that it is very important to the Marine Corps. Why is that?

General JONES. Mr. Chairman, some years ago my predecessor in the leadership of the Marine Corps made a decision to go for a generation leap, if you will, in technology. That leap meant that we decided to stay with our legacy F–18's and Harriers for a longer period of time based on the promise of the Joint Strike Fighter.

Everything I have seen to date from both competitors, whether it be the Conventional Takeoff and Landing (CTOL) or, as we are seeing now, even Vertical/Short Takeoff and Landing (VSTOL), is extraordinarily promising. Since I have been in office, I have been to several conferences around the world with my military counterparts, and I also just came back last night from the Paris Air Show. I am astounded at the number of senior leaders in uniform that approached me on the side and asked me with some sense of urgency, how is the Joint Strike Fighter progressing; you know we consider that to be very important to us.

Our British friends have invested over $2 billion up front in betting on this technology. In fact, they are restructuring the Royal Air Force based on the promise of the Joint Strike Fighter and the ability of those aircraft to fly off the ships of the Royal Navy.

For the Marine Corps, I mentioned this is a transformational capability because of its stealth, its range, its payload, its survivability. It will in fact replace two lines of aircraft that we currently use. Admiral Clark and I are in complete agreement that we have to figure out the way to get to JSF, as it is not only a militarily transformational capability, but also probably has the potential of being the F–16 of the 21st century for the industrial base of the United States.

Senator INOUYE. Thank you very much.

Senator Stevens.

SUPPLEMENTAL

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

Admiral Clark, you mentioned the supplemental. This is not a hearing on the supplemental, but just for my and the committee's information, is there a real deadline for money in July?

Admiral CLARK. There is, Senator, and it has to do with the operating accounts.

Senator STEVENS. Steaming hours, flying hours?

Admiral CLARK. Steaming hours and flying hours, specifically flying hours. We must have relief soon or in July I will have to start taking some actions to further inhibit the flying hour program. I say further because I have already taken action and I did early in the year to bring the level of release of funds in the flying hour program from a level that would keep us within the required standards for readiness standards for deployment.

But if we do not have relief in July, I will have to take additional actions at the operational level.

Senator STEVENS. How many ships of the line do you think you have now?

Admiral CLARK. I am sorry?

Senator STEVENS. How many ships of the line do you think the Navy has now?

Admiral CLARK. Well, I have 316 ships that are in commissioned or United States Naval Ship (USNS) civilian-manned ships.

Senator STEVENS. What is the average age?

Admiral CLARK. The average age of our force today is slightly over—between 15 and 16 years.

Senator STEVENS. What is your rate of replacement now?

Admiral CLARK. The rate over the last several years, 1 year it is six and 1 year, but it has been between six and seven ships.

Senator STEVENS. So your average age is going up about every other year by a year?

Admiral CLARK. I would have to run the math, Senator, but fundamentally it tells you that if you buy 6 a year, 30-year ships, you are going to a 180-ship Navy.

Senator STEVENS. Not good.

Secretary England, I want to get provincial first, if I may. We are dealing now with the final stages of ending the Navy's presence in Adak and I know that you realize we are appreciative of what the Navy has done to assist the local reuse authority. The community at Adak is an Alaskan Native community. It has now incorporated as a new city and will become Alaska's westernmost city. It has great hopes of becoming a free port and other things.

We have a problem in that special legislation is now required by Congress to convey the property to the Aleut Corporation. Are you familiar with that transfer problem?

Mr. ENGLAND. I am familiar, sir, that that is in process. I can tell you that my understanding is that most of that property intended for conveyance, except for the Mount Moffett area, will be environmentally suitable for transfer by early next year, 2002, and the Mount Moffett area will be ready for conveyance by early 2003.

So my understanding is that is now coming to a conclusion, sir.

Senator STEVENS. I thank you. Again, I thank you for the assistance. I think there is a future for that city. It is so far out, people forget that it is west of Australia.

V–22

General Jones, can we talk about the V–22 yet?

General JONES. Certainly, sir.

Senator STEVENS. Where are we now in the follow-up on the task force report?

General JONES. Sir, as you know, the task force convened to answer basically several fundamental questions. The first one in my mind was is tilt rotor technology mature? I believe that the testimony of the task force was very powerful in that context and they answered the question with a resounding yes, that the technology is in fact not only mature, but, to quote from their testimony, that it is in fact a national asset.

Senator STEVENS. There has been no question raised as to basic technology involved?

General JONES. The panel affirmed that the technology is mature and characterized it as being a national asset for the industrial base of the United States.

The second question, though, was if the technology is mature then is it operationally robust enough for use in the fleet or by marines? On that question, we are going back to the drawing board because their detailed investigation, which I thought was quite comprehensive, showed a number of things that were troubling and needed to be repaired.

Some of it is related to just engineering. It has nothing to do with technology itself. Specifically, the chafing of hydraulic lines in the nacelles was found to be a bigger problem than anyone had suspected. We were fortunate, to the degree there is anything fortunate in a tragic accident, but we did recover the part that failed in the December accident in North Carolina, revealing that wiring bundles had chafed the hydraulic fuel line to the point that it caused the fuel line to burst. That, coupled with the anomaly in the software flight control system, combined to cause the accident.

There is some work that needs to be done, obviously, in the software. That is ongoing. We have addressed already 85 of the 120 recommendations by the panel to be corrected. We have shored up to the extent that it needed to be the cohesion between the production base and the operational base of the marines and the squadron that are not only working on the aircraft, but will once again fly in the aircraft, to make sure their confidence, as you mentioned in your opening statement, is restored.

We had intended to be able to accept your request to go down and visit that flight lane. That invitation to you and the chairman and members of the committee is always there. I welcome that opportunity at your convenience. I think you will be pleased by what you hear and see.

Senator STEVENS. Is it flying now?

General JONES. It is not flying now, sir, and it will not until we have resolved the engineering rewiring of the nacelle.

Senator STEVENS. Is there a timetable on that, General?

General JONES. We are in the first 30 days of a 90-day review that was asked for by the Under Secretary for Acquisition and Technology. Those determinations are being made right now. It would be speculative on my part to guess as to when that might be, but I think we are talking before the entire program is restored to full health, I think we are seeing at least a year's slip.

EA–6B

Senator STEVENS. Mr. Secretary, in terms of the EA–6A's and EA–6B's, my staff and I have looked at that and I understand there is a study now concerning the EA–6B fleet and that there are two different proposals regarding the EA–6B's. It is my understanding further that the United States Navy is now the only service that is relied upon, or at least the lead service that is being relied upon, to provide the electronic attack mission.

Now, I have two questions. Do you believe that this funding for the plan for the EA–6B is adequately funded under the requests that are before us, and are you working with the other services to determine what funding is necessary for a follow-on to the EA–6B's to perform this mission?

Mr. ENGLAND. Well, Senator Stevens, again with your permission I would like to defer that to Admiral Clark. I just frankly have not been on board long enough to know that detail. Admiral?

Admiral CLARK. I would be happy to, Senator. This is a critical capability for our military and you are right on the mark, of course, as always. We are providing this capability for the entire military. There are Air Force pilots that do fly as part of the expeditionary squadrons.

Now, having said that, there is an analysis of alternatives going on at this time and so regarding decisions that have been made and so forth, there are no decisions yet. That analysis is continuing. That analysis is addressing what the follow-on to the EA–6B should be, what platform should it be in and so forth.

There is an additional issue with regard to the program and that is the modernization that is required for EA–6B, because the threat continues to improve and so this kind of capability we must continue to invest in. The current program has a funding line for something called improved capability (ICAP–III). This is an essential capability that I am now building that is very high on my priority list.

The discussion about what shape this will take in the future cannot be addressed until we figure out where the analysis of alternatives takes us. They are looking at a number of issues. I will just—this is Vern Clark's view about naval aviation and the costs of operations. Secretary England made the point earlier as a broad statement, not applied to this program, as a broad statement—in my opening statement I talked about the operation and the support costs spiraling.

The age of my air force is such, over 18 years average age of the naval air force, it is such that the cost of operating it and maintaining it is spiraling. I want to look ahead and get us postured on a footing that is going to provide us the replacement for EA–6B as soon as we can move to it. At that point in time we need to work with the Air Force and see what the right solution is for them in the future, whether we should continue to have this capability as a Navy-only capability or they should embed this in their expeditionary wings that they now have built and put together.

So that is a question that we must deal with. I have had discussions with Mike Ryan about that, but we do not have—we are not at a point that we can craft the way ahead.

The second part of your question is is it adequately funded. There is not—since we do not know what the solution is, there are no funds for follow-on aircraft in the program. There is funding for this necessary modernization that I talked about, ICAP–III, in the program. This kind of capability, whatever the analysis of alternatives shows us, this kind of capability will of course have to deliver with the capability that will allow us to defeat the threat.

Senator STEVENS. I think what I am getting at, are we spending money now on converting EA–6B when we ought to be spending money developing a new platform?

Admiral CLARK. The answer is yes to both questions. We are spending money to develop the follow-on improved mission capability within the airplane and we are also spending money on the development of the future platform, just the analysis of alternatives.

Senator STEVENS. Very well. Thank you. We may have to visit further on that, Mr. Chairman. I apologize for taking so much time right now, but I would like to be excused after this question. I have to meet with Senator Byrd about the supplemental.

VIEQUES

But I would be remiss if I did not ask both the Secretary and Admiral Clark concerning the Vieques problem. Secretary England, we put $40 million in the current year's supplemental to implement the agreement reached by President Clinton on Vieques. Have those funds been obligated, do you know, and is the remainder, if there is a remainder, can it help deal with the problem that now exists because of the change in policy?

Mr. ENGLAND. Sir, $5 million has been obligated for direct execution by the Navy. We have obligated $1 million for apprenticeship programs in Vieques and $4 million for what we call the mini-grant program, that is small sums of money, $25,000, $50,000, for businesses to expand their business. That money has not all been spent. It has been obligated.

We have also transferred $3 million to other agencies, namely $1.6 million to Health and Human Services for various health studies associated with the island and $1.4 million to the Department of the Interior, and that was for management of the conservation zones on the island. So $5 million obligated in addition to another $3 million that has been transferred. That $3 million I believe has basically been spent. The $5 million has not all been spent, but some has been obligated.

Regarding the remainder, because it was up to $40 million, at this point I would certainly like to retain the $40 million until this whole matter comes to a conclusion. So I would like to have the flexibility as we go forward to deal with any issues that may come up as we work to resolve this issue.

Senator STEVENS. Admiral Clark, you have in the Pacific Fleet a comparable facility, right?

Admiral CLARK. Well, it is not comparable in the pure technical sense, but we do train and develop our battle groups with the same objective in mind in both fleets, but with different capabilities. For example—and I mentioned we just had a battle group, the Carl

Vinson, just completed this operation and I talked to the battle group commander yesterday.

Off the coast, the West Coast of the United States, you have got San Clemente, you have got Camp Pendleton right there, and you have got ranges within reach of the battle group and the amphibious ready group as it is working up. So it can operate from one geographic location, and I do not mean a fixed point in the ocean, but I mean within the footprint that a group, a carrier battle group and an amphibious ready group occupy when they are operating together at sea.

They can reach all of these sites and fundamentally they integrate their operations that way from one general position.

On the Atlantic side you cannot do that. The reason Vieques had such appeal to us is that it was the only site that we had the air space where we could do the Marine integration, do the aviation integration, and the Navy surface fire support all in one location. Again, one general area called Vieques.

The other available sites to us are hundreds of miles away, so that you cannot do that kind of integration, operating—we have used when Vieques was not available to us Eglin Air Force Base, we have used sites in Florida and sites off the coast of Carolina. So while we can integrate the operations in California, it is at different sites that are all within reach. When you are in the southern California operating area, you are a matter of a dozen or so miles from San Clemente and Camp Pendleton and so forth. So you can reach it all and still be integrated even though you are using different sites.

So the Vieques site just puts those all in one place. We do not have such a way to integrate it in other places on the Atlantic side.

Senator STEVENS. Thank you very much.

Gentlemen, former Admiral Roof has just announced a new concept of ocean wilderness areas. Having been deeply involved in the extension of our jurisdiction over the water column beyond our traditional limits of 3 miles and understanding, the way I understand the proposal the Admiral is coming forward with, it is a concept of determination of areas off our shores where the wilderness concept will be applied.

I urge you to start studying how that will impact our Navy and our Marine operations and particularly in terms of training and our ability to defend our Nation. Beyond that, I would hope that some of your lawyers would teach Admiral Roof a little bit of admiralty law. We did not claim jurisdiction over the ocean in terms of the surface. We do not exclude foreign ships from our zone beyond 3 miles. We protect the creatures of the sea in order to assure their reproductivity, but we have not made a national claim beyond 3 miles to my knowledge to the extent of excluding vessels from navigation.

I think we are headed for a real battle up here over this proposal as I understand it and I would hope the Navy will be prepared to, as they did during the Law of the Sea discussions that I participated in some 30 years ago, be prepared to take a role for our Nation in preserving our ability to utilize the areas off our shore for our own defense.

Thank you very much, General and Mr. Secretary and Admiral. I hope you will excuse me, Mr. Chairman, and I apologize for taking too much time.

Senator INOUYE. Senator Cochran.

DD–21

Senator COCHRAN. Thank you, Mr. Chairman.

The chairman asked questions about the DD–21 program. I noticed in General Jones' prepared statement there is a comment about the importance of Navy precision fires being an essential dimension of the capabilities of the Marine Corps on pages 13 and 14. I was curious as to whether or not, General Jones, you would have an opinion about what the loss of the DD–21 would mean in terms of impact on naval gunfire support for the Marine Corps?

General JONES. Senator, thank you for that question. The fact is that one of the serious shortfalls in our warfighting capability as we pursue the land campaign is in the field of fire support, both land-based and sea-based, as contrasted to say 20 or 30 years ago, in the 20th century. The Marine Corps had a healthy, very healthy and robust shore-based artillery fire support system, which over the years we attempted to modernize, but what we really wound up doing was virtually scrapping it, to where we have one field artillery piece left called the M–198, which is not a bad field artillery weapon, but certainly not very expeditionary.

So the Lightweight 155 is a very important program for us. Furthermore, at sea we also scrapped most of our shore bombardment capability. I do not need to remind you of the debates we have had over the last 20 years on the activation and deactivation of battleships and the like, all for very, very good reasons.

The transformational aspect of what the Navy precision fires program is is really important. It is not only important to the Marines, it is important to the joint warfighters. If you look at the likelihood of prosecution of the Nation's future battles, it will probably be in the littorals. As far as we can see, certainly those are going to be the flash points of the future. Having a transformational precision fire capability allows you to deliver ordnance at much greater range with greater precision, so that those units that are out there, which will probably be smaller but much more lethal and much more effective than they were in the 20th century, because we will depend on speed, mobility, lethality, stealth, and sustainability for those forces, but they will only survive if they have the robust backup of systems like those provided by the DD–21.

So the DD–21 is a very, very important program for the Navy and very important for the Marines.

Senator COCHRAN. In your response you mentioned the 155 millimeter howitzer, the Lightweight Howitzer. As I understand it from your statement also on page 12, you say it will make a major impact on improving outdated artillery capability. Can you tell us the status is of that program and what the committee could do to support the development of this system?

General JONES. Yes, sir. The Lightweight 155 has a lot of technology built into it. For example, it is about 6,500 pounds lighter than the M–198, which it is going to replace. It is a joint program. The Army is very actively involved in this with us, so it has tre-

mendous support. As recently as 3 weeks ago, we had the successful shoot of the second gun at Aberdeen. The first gun has been a success.

So there are some minor problems, developmental problems with the sighting system, for example, but these are not show-stoppers. These are problems that you have with new technology that we will overcome. I would characterize the program as not only being extremely important, but one of the programs that appears to be on track, and would recommend and appreciate your support.

Senator COCHRAN. Thank you very much.

General JONES. Thank you, sir.

MODERNIZATION PROGRAMS

Senator COCHRAN. Admiral Clark, you mentioned the Navy's modernization programs. One of the events that occurred in our State was the repair of the U.S.S. *Cole*—I mentioned that in my opening statement. One need that was highlighted by that experience was the lack of an offloading facility for ammunition at that naval station. I am told that the requirement now is if you want to offload ammunition you have to go to Yorktown, Virginia. That is a 10-day round trip.

Would it make sense for us to put a weapons loading wharf at Pascagoula to reduce time away from home port and also have a more efficient naval station at Pascagoula?

Admiral CLARK. Senator, I remember the days of U.S.S. *Cole* and tracking her across the ocean and watching her inch by inch on my chart, and the issue coming up of the ordnance issue. There is no doubt about it that it would be a lot more convenient if we had the capability to do that in Pascagoula.

The discussions with the staff inform me that there are certification issues in Pascagoula that have to do with explosive arcs and so forth. That said, this is a capability that needs to be examined and see what those roadblocks might be and then evaluate, given the number of ships that we have in Pascagoula, the best way to meet this requirement from a cost effectiveness point of view.

But fundamentally, if we had such a capability it certainly would be better.

MISSILE DEFENSE

Senator COCHRAN. In the discussion of the challenges of the future, the Navy is involved in missile defense activities. You have the Navy Theater Wide Program. You also have had in recent days an announcement by one of your officers, Rear Admiral Remp, that the Navy could provide a boost phase missile defense system in about 1 year for less than $200 million, according to one news report. I do not know how accurate that report was.

Could you tell us what you see as the capability of the Navy in terms of development and early deployment of missile defense systems?

Admiral CLARK. I would be happy to, Senator. Thank you for the question. In the first 11 months that I have been CNO, I have been looking at this program carefully, especially in light of the announcements made by the President and Secretary Rumsfeld about the investments that they intend to make in missile defense. My

position on this has been that we need to prove the capability that we have been investing in.

We have had wonderful support from the Congress in helping us try to extract the utility that is available in Aegis to give us a near-term capability. We are committed to the development of the area capability first and foremost, I think for very obvious reasons. I talked in my opening statement about what the defense reviews and the QDR is going to come down to.

What are they going to say when this whole process is over? I am convinced, and not speaking for what the documents are going to say, the way I see the world, I see a world where for us to rely on host nation support for the future entails risk that we want to have a hedge against. That hedge comes from our ability to operate in the domains that I call the international space, that is the maritime zones and space itself.

I cannot imagine any solution other than a very strong Navy-Marine Corps capability that will allow us, without being encumbered by sovereignty issues, will allow this Nation and the President of this Nation to have options to be able to put military capability, combat-credible capability, into points where we need to influence events.

In order for us to be there—and as the threat develops, we are going to need the capability to defeat the kind of adversary with improved technology on the part of potential enemies. We are going to need area capability first.

The second thing becomes clear, that if we cannot continue to develop—and this is a development issue; clearly we do not have it. But to take on boost issues, boost capability, with our existing systems and develop the capability and prove that we can hit the target. The boost part of it is not significant, and in an unclass hearing we probably should not go a lot further than this. But I believe that those two capabilities we should be investing in and see where that takes us.

There are follow-on issues that, if you wanted to go to next level kinds of capabilities, you would need to make other kinds of investments and potentially could lead to different size and shape missiles and so forth. But the kind of capability I am talking about is extracting utility out of and investing in the advancements within the current system that we have and taking it as far as we can and as rapidly as we can.

So for us that becomes theater-wide capability, but area first.

Senator COCHRAN. The question of funding comes up with respect to the adequacy of the budget. I know the Air Force, for example, thought that it had such a major stake in airborne laser technology that it went on and put funds for the development of that program in its own budget. It was not funded through the Ballistic Missile Defense Organization (BMDO). Would the Navy be willing to or have you up to this point considered funding some of these activities through your own budget and not waiting for funding through BMDO?

Admiral CLARK. Well, Senator, I cannot answer this question for budgets past because I was not here. But I am on record as stating that—we are currently operating under seeking to achieve a force level and structure that was specified in the 1997 QDR. I am on

record as saying that I was somewhere in the neighborhood of $13 billion short a year in being able to sustain that force, with the issues that we have already raised with regard to recapitalization of our aircraft capability and ship capability.

I am convinced that what we see here is that as the funding migrated to BMDO, with the other financial pressures that exist, it is seriously inhibiting our ability to recapitalize and modernize. It is very difficult to have BMDO funding this and then fund it out of Navy programs.

I would then say that the 2002 deliberations, of course, are going on and I cannot speak to how that is going to come out. I am building, doing the groundwork for the building of the first budget that I will send forward as the CNO in the 2003 Program Objective Memorandum (POM). It certainly is something that will be considered, given what happens, as the 2002 budget proposal is sent forward. I can speculate about the importance of it, but I also have to be honest with you and direct and say, given the shortfalls that exist, it is difficult to do that while BMDO is funding investment in this area and then looking at the other shortfalls that I have addressed that are complicating that problem.

Senator COCHRAN. Thank you very much.

Thank you, Mr. Chairman.

Senator INOUYE. Thank you.

Senator Bond.

READINESS

Senator BOND. Thank you very much, Mr. Chairman. I am delighted to join you, Senator Stevens and others in welcoming Secretary England, a fellow Missourian General Jones, and the Admiral, who is a very fine graduate of one of our proud institutions, Evangel College in Springfield, Missouri.

Gentlemen, I am very much concerned about the readiness status of our military and I would like to address a question first to General Jones and then to Admiral Clark. I understand that the current defense supplemental request addresses the most pressing readiness needs of the Marines and the Navy, and these are items that have to be done in order to avoid stopping operations in many areas.

But I believe, and I would like to have you give me an idea of some of the additional unfunded requirements that you will be forced to address through reprogramming readiness and/or modernization funds for fiscal year 2001. What are your needs, General Jones?

General JONES. Well, sir, what we actually received was an ability to cover our most pressing bills and our most unforeseen must-pay bills, primarily those bills which were externally driven, like increases to military pay and entitlements, health care, utilities, flying hours, and the like.

There was also some force protection issues that had to be funded. Thus far, we have avoided, thus far avoided, curtailing operations by deferring doing what we normally do to pay for these requirements, and that is the maintenance of our infrastructure, to pay utility bills and the procurement of ground equipment in the event we were forced to absorb these bills.

Basically, our shortfall, though, was about $27 million—$21 million in military personnel accounts and $6 million in operations and maintenance, for things like pay raises for our information technology civilian personnel, a reduction in Government of Japan burden-sharing, some collateral equipment, and this is really the range of the impact that we are going to have to figure out some reprogramming actions to cover those requirements to get us through 2001 with the hope and the expectation that we can remedy these problems in the first quarter of 2002, recognizing that it is a hope.

Senator BOND. Those are not covered in the supplemental?

General JONES. Correct.

Senator BOND. Admiral Clark.

Admiral CLARK. My fundamental area is similar to General Jones'. The reprogramming request will address issues in manpower primarily. I mentioned in my opening statement that we are making progress in the war for people. I talked about the battle groups that are getting ready to deploy. The last two that we have deployed, Senator, are in better manning condition than any we have sent out of here in a dozen years. This is good news.

In the process, I am retaining more people and our combination of recruiting and retaining is that we are slightly overexecuted. By that I mean that we have an end strength, but then you program what level of that end strength you are going to have on board at certain times in the year based upon past track history. We are doing better than that. So these are the areas that we need to fix with the programming actions.

The other area that I would just address—and by the way, the manner in which this was sent forward was to address the areas that were absolutely critical and vital to us continuing operations for 2001 and push what things could be sent into 2002, the plan is to push that forward in 2002. Of course, that is still, that is all being worked in the Office of the Secretary of Defense (OSD).

But the other area that I would talk about is in the area of real property maintenance. I also mentioned that in my opening statement. This is the quality of life, quality of work thing. This is the easiest account to cut. It has always been this way. It has been this way since I have been in the Navy.

I am concerned about this because we have to turn this around.

F/A–18E/F

Senator BOND. We are, too, and we look forward to working with the chairman to see what relief we can provide and how we can best provide it.

Admiral Clark, I was disappointed to see the numbers of appropriated F/A–18E/F Super Hornets reduced in fiscal year 2001. I understand you may also reduce the quantity provided in the 2002 budget. Based on the requirements to replace legacy carrier aircraft, I hope that you would reinstate the number of Super Hornets at the appropriate time in an effort to execute fully the approved multi-year agreement, in which the government gets the best buy, the best deal.

What are the Navy's plans for executing the multi-year plan for the Super Hornet?

Admiral CLARK. Well, again the 2002 budget amendment is being worked, and let me just talk about what this CNO would like to see. Secretary England alluded to the fact that he would like to see JSF come on line quicker. Well, I want every—we need to maximize our investment in the aviation accounts. I see us in this—we have this balance that we are trying to work here. We have got to maintain the current readiness of our force because we are deployed and we are out on point, and on the other side we have got to try to modernize this force.

Senator, this dichotomy is causing—and again, this force is 18 years old now on average. We have got to accelerate the retirement of these older aircraft that are costing so much to keep operating. I believe that the path out of that is to maximize our investment in the replacement accounts and to do that as rapidly as possible. So where I would like to be is that I want to be at the top end of that multi-year. We have to figure out how to get there. That is my objective. I want to be on the record that the way out of this is to accelerate our way out of it with the procurement of new aircraft that give us the reliability and maintainability that we need, so that we are not being eaten alive with spiraling operational support costs, which is about 15 percent a year over the last 4 years.

Senator BOND. Keep that in your thoughts and prayers as you work on 2002.

Admiral CLARK. Yes, sir.

Senator BOND. Thank you.

Admiral CLARK. Secretary England, did you want to comment on that?

Mr. ENGLAND. Senator, we will honor the multi-year and we will definitely buy sufficient quantities to maintain that multi-year in the F–18E/F program. So while we do not know specifically what that quantity will be next year, it will definitely be within the range that was negotiated to maintain that multi-year.

PILOT TRAINING

Senator BOND. Thank you, sir.

A question maybe for Admiral Clark and maybe for the Secretary as well. Obviously, pilot training is an important part of supporting both the Navy and the Marine Corps operational readiness. I am hearing that the Navy is cutting back on the procurement of T–45 Goshawk training systems, which could have a direct impact. What are your plans for continuing to pursue the 234 T–45 aircraft that have been determined to be the optimal number to meet the operational pilot training rate?

Admiral CLARK. I have to go back and review the numbers for you, Senator. If you would like, I will submit the details on that for the record.

Senator BOND. We would appreciate that.

[The information follows:]

The 234 T–45C aircraft total represents the number required to support the operational pilot training requirement until fiscal year 2035. The Navy completed a study in December 2000 that analyzed options available to support the pilot training rate through fiscal year 2035. These options included continued procurement of T–45C aircraft, extension of the T–2 Buckeye beyond which was previously envisioned, and follow-on trainer aircraft new start research and development requirements. The Navy is now conducting a prioritized review of programs as part of its fiscal

year 2003 budget submission process. A focal point of this process will be a review of options available to meet the pilot training requirement. Continued procurement of the T–45C Goshawk training system will be among those options reviewed.

Admiral CLARK. I would say the principle has been that—here we are again in this balance that I am talking about, and that we are going to buy those aircraft, but we are going to buy them at a rate at which we need to replace the existing inventory, and that is a tradeoff decision that will have to be examined again as we build our next budget.

AV–8B HARRIER

Senator BOND. One last question for General Jones and I will submit additional questions for the record. Mr. Chairman, I appreciate your indulgence.

General, the AV–8B Harrier is the mainstay for the close air support for the Marines, and the requirement for conversion of older models to the all-weather night attack variants as I understand it remains a high priority. Has the requirement for additional conversions changed and can we conclude that the Marine Corps needs additional AV–8B's?

General JONES. The Marine Corps's AV–8B program is one of the success stories of this past year, year and a half. A year and a half ago, I was extremely concerned with the reliability, maintainability, availability of parts, in fact the safety of the program. I would like to take the opportunity, Senator, to underscore the fact that Marine Corps aviation as a whole is experiencing its safest year in recorded history this year, knock on wood and hope it continues.

One of the reasons for that is that the AV–8B has had a tremendous resurgence in capability, some of the program, the program that you just referred to, but a true story of success with partnership with industry and the operators on the flight line. As a result, our pilots are averaging more than approximately 20 hours of flying time on the AV–8B's. They are flying safely, they are excited about their airplane. They have confidence in it. It is a wonderful story and I am very grateful to the CNO for his blue dollar support, that is what we call it, to that very important program.

With regard to the upgrades, the upgrades that we have in mind will allow the AV–8B to continue on into the future and to let us transition, which is our ultimate goal, to transition to the Joint Strike Fighter at an appropriate time. It is a very exciting program.

Senator BOND. General, thank you very much. Thank you, gentlemen. We appreciate the opportunity to hear your very good information. Thank you.

Thank you, Mr. Chairman.

FUTENMA MARINE CORPS AIR STATION

Senator INOUYE. Thank you.

Mr. Secretary, if Okinawa is to remain the headquarters of the Third Marine Expeditionary Force, it would appear that our relationship with the Okinawan prefectural government must improve. An important part of this relationship is the future of the Futenma

Marine Corps Air Station. Can you tell us what the status is at this time?

Mr. ENGLAND. Can I have General Jones address that, please.

General JONES. Mr. Chairman, as you know, we have for some years been in negotiations with the Government of Japan on the future of our forces on the island of Okinawa. The facts are that over the years the southern half of the island has become very crowded and the space is available in the northern half of the island. As a result of a series of agreements called Special Action Committee on Okinawa (SACO) agreements, we have entered into an agreement that at a point in time the air base at Futenma would be returned to the host nation and the prefecture of Okinawa in return for building adequate facilities in the northern part and less inhabited part of the island.

To date that is the sum and substance of the progress that has been made, simply that agreement. We stand by to honor that agreement at such time as the host nation desires to move ahead with the implementation phase.

Senator INOUYE. Is it not true, General, that we are prepared to move, but the Okinawan government and the Japanese government are still negotiating?

General JONES. That is correct, sir. We find ourselves in the middle of intermurals many times between host nation issues, between a prefecture and the host, and their government. But I would like to say for the record that I know of no military community anywhere that works harder to be a good neighbor to the people that surround our bases and stations, not here in the United States and not anywhere in the world.

The fact that every small incident—and they have not all been small—but every small incident is banner headlines by the small but vocal opposition to our presence on the island makes life there just a little bit more difficult for our commanders than anywhere else in the world. But I would also underscore to you that as a result of the support of the host nation that I consider that the totality of our bases in Japan, to include Iwakuni, Okinawa, and our base at Camp Fuji in Japan, to be the Marine Corps' finest bases from the quality of life, from a modernization standpoint, quality of work spaces. That is reflected in the high number of reenlistments and extensions and family stability and appreciation for life on the island.

That is a remarkable transformation over what it was during my career, which started—my first visit to Okinawa was in 1967 and I have been there at least once every 10 years. As Commandant, to be able to go back to the island and to see the people to people projects, the cultural exchanges, the educational projects that are vibrantly in force on the island, to see for the first time ever a recent poll that showed that a slim majority of the people on Okinawa actually favor a continued presence of U.S. forces, is very, very heartwarming and very I think great credit to our leaders and the Japanese leaders and the government on the island, to work together to try to achieve satisfactory outcome to this island that is very geostrategically important to our future and the peaceful future of the Asia Pacific Rim.

Senator INOUYE. General, I am certain you know that I was there last year, and I must join you in your conclusions, and in so doing would like to congratulate you and the Corps for the fine work you are doing there.

General JONES. Thank you, sir.

Senator INOUYE. One of the conditions the prefectural government has articulated is that they would like the set a time limit of 15 years for the use of the Futenma replacement facility. Can you live with that?

General JONES. Mr. Chairman, as you know, that is a matter that, as they say in the vernacular, is beyond my pay grade. This is a policy issue for our government and the Government of Japan, and I am in the execute mode when that decision is made. I would fall back on my statement that geostrategically our base on Okinawa and our bases in that part of the world, particularly with the emphasis that the current administration is putting on Asia Pacific in our future from the standpoint of our economy and our engagement strategy.

If we did not stay there, we would certainly have to develop some sort of alternate basing at least in that region. I might just add parenthetically, even though I have said it earlier, that I think the future of our land bases as we know them today might look considerably different in 15 or 20 years. We need to constantly be engaged in not only developing our sea basing capabilities, but, who knows, perhaps other alternative bases in the region, including, inclusive of Okinawa, and maybe even our own bases which might be underutilized, for example, in Guam and places like that.

AMPHIBIOUS SEALIFT

Senator INOUYE. Admiral, if I may ask a question. Two-thirds of our Marine forces are in the Pacific area, one-third in the Atlantic area. Yet the amphibious sealift availability is just about 50–50. Can we not increase the sealift for the Marines to about two-thirds?

Admiral CLARK. As we have talked about on other occasions, Mr. Chairman, and I committed to you that I was the guy about challenging our assumptions and I intended to do that as we put our program together for the future, I owe you an answer on the question and the challenging of those assumptions.

My work to date leaves me—I am at this point in this discussion, that the decisions on home porting in the past have been made relative to the peacetime deployment posture that we are in and that the larger proportion of the Marines in the Pacific are basically about the fly-away groups that fall in on the maritime preposition ships, and that changes the balance between the Atlantic and the Pacific.

What I promised you as we go through the defense reviews and the QDR and as I build the program for the future is that I would analyze how and challenge every assumption about the way this decision has been made. We are in the process of doing that and I will report to you when I have those conclusions.

ADDITIONAL COMMITTEE QUESTIONS

Senator INOUYE. Thank you very much, Admiral.

Like my colleagues, I have several questions I would like to submit for your response, Mr. Secretary.

Mr. ENGLAND. Yes, sir.

Senator INOUYE. May I, on behalf of the committee, thank you and your extraordinary team for the great work you have done for our country.

Mr. ENGLAND. Thank you, sir.

Senator INOUYE. So once again we thank you for your testimony today.

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

QUESTIONS SUBMITTED TO GORDON R. ENGLAND

QUESTIONS SUBMITTED BY SENATOR DANIEL K. INOUYE

PRIOR YEAR SHIPBUILDING COST GROWTH

Question. Secretary England, the fiscal year 2001 Supplemental Appropriations request includes $222 million for cost growth in the shipbuilding account. This is in addition to $500 million in transfer authority for increased shipbuilding costs that has already been used in fiscal year 2001. We are told that the bill for cost growth in fiscal year 2002 may be as high as $800 million. Mr. Secretary, we are very concerned that cost overruns in the shipbuilding accounts may be out of control. As a former businessman, what can you tell us about the cause of these cost overruns and do you have a plan to get them under control?

Answer. The funding required to complete construction of ships currently under contract has increased significantly. SCN funding is already insufficient to finance current force structure requirements and prior year completion "bills" exacerbate the issue. Cost growth on ship construction contracts erodes the confidence of Congress in our estimating and budgeting process for future procurements. Many factors have contributed to the cost growth of current ships under contract, including: Low rate procurement of vendor material and Government Furnished Equipment; Configuration changes; Budget reductions/rescissions; Unanticipated challenges with the design and production of lead ships; and Inflation and fiscal constraints.

All of these factors, but particularly fiscal constraints, cause the Department to budget procurement programs tightly. The consequences of these factors are that any cost growth or budget reduction causes immediate execution issues. During times of robust ship construction, the Ship Cost Adjustment (SCA) process would allow the Navy and Congress to finance programs which were experiencing difficulty with those that were performing well. Due to fiscal constraints, the SCA process is no longer viable and does not fund program execution shortfalls due to lack of assets.

To prevent further increases to the prior year completion funding shortfall, the Department is pursuing the following corrective actions:

—Remedy the systemic issues within our control and provide incentive for industry partners to do the same.

—Ensure that estimating and budgetary processes better reflect cost risk of factors beyond our control, such as inflation.

The Navy's amended fiscal year 2002 President's budget requests $800 million to address the near term issue. This prior year budget request only addresses funding required to execute the prior year programs during fiscal year 2002. The program execution consequences of receiving funding below the request are very serious and are not in the nation's interest.

JOINT STRIKE FIGHTER

Question. Secretary England, on the matter of the Joint Strike Fighter, there have been press reports that a decision has been made to go forward with the program. Is this true?

Answer. A formal decision regarding Joint Strike Fighter (JSF) has not been made. The JSF program is currently in the Concept Demonstration phase, with both Boeing and Lockheed Martin conducting flight demonstrations of their Concept Demonstration Aircraft. A Milestone II review will take place in the fall of 2001.

Following a successful Milestone II review decision by the Department of Defense, the Engineering and Manufacturing Development contract will be awarded.

Question. Is JSF affordable for the Navy with your other priorities of F–18E/F and the V–22 in Naval aviation?

Answer. Joint Strike Fighter, F/A–18E/F, and V–22 support our long-term strategy to reduce the number of types and models of aircraft in the active inventory. We need an affordable multi-mission force that possesses improved mission flexibility, effectiveness, supportability, and mobility. Each of these aircraft replaces aging legacy aircraft and offers significantly improved supportability, cost of ownership and warfighting capability.

V–22

Question. Mr. Secretary, when will the decision be made about the long-term purchase plans for the V–22? Do you anticipate that much more R&D must be completed before we move to full rate production of the aircraft?

Answer. Currently, the Department of Navy is reviewing the program to determine the way ahead for the V–22. The date for the V–22 full rate production decision will be based on successful completion of events as we proceed with the restructured development program. The Navy does intend to continue to procure the aircraft under low-rate initial production until a full rate production contract is awarded. The fiscal year 2002 President's Budget will reflect the costs of additional development.

COOPERATIVE ENGAGEMENT CAPABILITY

Question. Secretary England, the Navy and the Marine Corps are both looking to improve their single integrated air picture but are currently looking at different systems to enable this, how in the new era of interoperability will this be overcome in joint operations?

Answer. A disciplined systems engineering process is underway to develop and implement incremental and systemic improvements to command and control architectures of existing service weapon systems, enabling joint operations while evolving to a true Single Integrated Air Picture (SIAP). Navy efforts also are being coordinated with the Department of Defense SIAP System Engineer. A case in point is the Navy development of Cooperative Engagement Capability (CEC) which has been tested and demonstrated to provide a solid foundation for SIAP with ships, aircraft and land-based Marine Corps units. The Marine Corps has approved an Operational Requirements Document that includes a CEC capability, and has programmed funding to procure CEC systems. Additionally, the Marine Corps is adapting components of the Navy CEC system to land applications. Through the common use of CEC, the Navy and Marine Corps will have jointly taken a major step toward an integrated air picture. The long range engineering challenge is to provide a coherent tactical picture of the theater-wide battlespace for use by joint operating forces. It is expected that as CEC evolves, other joint systems may also be outfitted with CEC.

QUESTIONS SUBMITTED BY SENATOR ARLEN SPECTER

Question. The Washington Post recently reported on Secretary Rumsfeld's emphasis on more flexible, rapidly deployable forces. The FastShip project involves the use of Maritime Administration Title XI loan guarantees to finance the construction of four 38-knot, U.S.-flag, roll-on/roll-off, commercial cargo ships. Each of these ships is capable of transporting 300 helicopters to the Persian Gulf in less than 11 days and of carrying 10,000 tons of military cargo over about 5,000 nautical miles at a speed of 36 knots without refueling. Would the availability of such a fast sealift vessel be consistent with Secretary Rumsfeld's new emphasis?

Answer. The Navy has been following the progress of the FastShip project for several years. Several Navy-sponsored studies and analyses show that a FastShip vessel, when modified with appropriate National Defense Features, can become a very useful sealift asset. In this manner, a FastShip vessel which normally operates in commercial service, becomes an "active" Ready Reserve Force asset providing high speed sealift at a much lower cost than maintaining such a ship in the Navy's organic sealift fleet. It should be noted, however, that no funds have been requested in the Navy's fiscal year 2002 budget submission because the FastShip or other comparable projects have not yet progressed beyond the project stage.

Question. In 2002 the contract to host the Army-Navy football game will be renegotiated for the following 10 years. Philadelphia is the traditional home for this great contest and is centrally located between the two academies with superior

transportation infrastructure, hotel accommodations, tourist attractions and a new football stadium under construction. Who will make the decision and what criteria will be used to award the contract?

Answer. Contract decisions regarding future hosting of Army-Navy football games beyond 2003 will be made jointly by the Superintendents of the Naval Academy and Military Academy. A Request for Proposal (RFP) is being prepared by the Directors of Athletics of the two academies to be submitted to both Superintendents for final approval. The RFP will be sent to all interested cities/stadiums for their review and potential bid. The RFP will include a request for all details surrounding the game. It is intended that the RFP will be distributed to potential bidders by early 2002, with final contract decisions to be made by the end of 2002.

QUESTIONS SUBMITTED BY SENATOR KAY BAILEY HUTCHISON

Question. Last week I noticed that Secretary Rumsfeld's review panel on the transformation of conventional forces recommend accelerating the Navy JSF program by two or three years in order to add radar-evading stealth capabilities to our carrier decks.

What is your opinion on accelerating the Navy's JSF production and how would this affect the current FA–18E/F requirement and numbers?

Answer. The Secretary of Defense is currently conducting a comprehensive strategic review of the Department's near and long-term requirements. The results from that review will be incorporated into the Quadrennial Defense Review to provide the appropriate prioritization of our programs to meet those requirements. The Joint Strike Fighter (JSF) is an affordable and critical element of the Navy's total force modernization plan. JSF is the first step in the direction to develop airframes that could be used more commonly by each of the services. The carrier variant promises both stealth and standoff precision-guided weapon technology that will complement the F/A–18E/F Super Hornet.

Accelerating the pace of Naval Aviation modernization is one of the most challenging issues facing Navy leadership today. Initial procurement of the Navy's JSF variant could be accelerated two years, from fiscal year 2008 to fiscal year 2006, concurrent with initial procurement of Air Force and Marine Corps variants. Additional programmatic risk would be minimal, but availability of funding earlier would be a major consideration. Accelerating initial JSF procurement to earlier than fiscal year 2006 would increase concurrency and program risk. Earlier procurement of the Navy JSF means that the Navy would have to spend less on F/A–18C/D center barrel replacements and could retire that legacy platform sooner.

In the interim, the Navy must ensure its current force is ready for combat. Based on the Program of Record, F/A–18E/F requirements and numbers would not change.

Question. The other service Secretaries have encouraged the Congress to authorize another round of BRAC. Does the Navy and Marine Corps support another round of BRAC? Has the Navy realized any cost savings from the last rounds of BRAC?

Answer. I fully support the Secretary of Defense's efforts to prepare a proposal for additional rounds of BRAC. Infrastructure is one of the key components in the Quadrennial Defense Review now underway. I expect the review to lead to an overall defense strategy, the requisite force structure to meet that strategy, and an appropriately sized infrastructure to support that force structure. The savings realized would assist Navy in properly resourcing for readiness at sea and properly maintaining the enduring infrastructure.

The Department of the Navy has achieved significant cost savings from the four previous rounds of BRAC. The 1998 Report of the Department of Defense on Base Realignment and Closure estimated net OSD savings during BRAC implementation at approximately $14 billion through 2001 and recurring savings at $5.6 billion annually thereafter. Navy's share for net implementation and recurring savings is $5.8 billion and $2.6 billion respectively. OSD projects that the proposed Efficient Facilities Initiative will save an additional $3.0 billion annually.

I would also add a word of caution.

While BRAC savings can be substantial, it can take one to four years before the savings and cost avoidance are realized. BRAC is one of many initiatives that will produce savings essential to enhancing our maritime readiness.

Question. I am very concerned about the aging infrastructure of our military posts. What is the shortfall of your Sustainment, Restoration and Modernization (SRM) account for the Navy? Does the proposed supplemental budget from DOD address those shortfalls adequately?

Answer. In developing future Program Objective Memorandums, we will address our facilities requirements in terms of Sustainment, Restoration, and Modernization as defined by the Department of Defense's Facility Sustainment Model. Through fiscal year 2002, we have used the maintenance backlog and asset preservation index (API) to define these requirements. The Facility Sustainment Model will help us better define a total facility investment strategy, via an asset preservation strategy.

We need $136.6 million to arrest the growth of our critical maintenance backlog and increase our API to comparable industry standards in fiscal year 2001.

The proposed fiscal year 2001 supplemental appropriation was not intended to address shortfalls in the Sustainment, Restoration, and Modernization accounts.

Question. Admiral, the successes of several important Navy programs are too often overlooked when ballistic missile defenses are debated.

Would you update us on the success of the Navy's theater missile defense programs?

Answer. The Navy has two programs engaged in Missile Defense: Navy Area Theater Ballistic Missile Defense (TBMD) and Navy Theater Wide Ballistic Missile Defense.

Recent successes in the Navy Area TBMD Program include:

—Completed in-depth aero-thermal survivability program (wind tunnel, shock tunnel, and sled testing) to verify survivability of Block IVA infrared sapphire dome in April 2001.

—Executed procurement of long-lead material to support SM–2 Block IVA low rate initial production in December 2000.

—Completed ground-based live-fire test and evaluation phase in November 2000.

—Began land-based flight-testing, successfully completing two controlled test vehicle flight tests at White Sands Missile Range in June and August 2000.

Recent successes achieved in the Navy Theater Wide Ballistic Missile Defense program include:

—Conducted high-range resolution and captive carry test bed work in March 2001 as part of the Theater Critical Measurements Program.

—Demonstrated ballistic missile warning, battle management, and command, control and communications capabilities during Quick Reaction Launch Vehicle mission in March 2001.

—Conducted the first "full-up" test of the Solid Divert Attitude Control System (SDACS) in February 2001.

—Demonstrated third stage guidance, nosecone separation, kinetic warhead (KW) seeker separation, and KW ejection during the SM–3 Aegis Leap Intercept flight test launched from U.S.S. *LAKE ERIE* (CG–70) in January 2001.

—Completed the SDACS Engineering Evaluation in December 2000.

QUESTIONS SUBMITTED TO ADMIRAL VERNON E. CLARK

QUESTIONS SUBMITTED BY SENATOR DANIEL K. INOUYE

DD–21 LAND ATTACK DESTROYER

Question. Admiral Clark, the DD–21 has been billed as the ship of the future for the Navy. We understand that the contract award for the ship has been delayed as we await Secretary Rumsfeld's review and the Quadrennial Defense Review (QDR) for answers.

Can you tell us, has a decision on the future of the DD–21 been made?

Answer. Although no formal decision has been made on the future of the DD–21 program, the Navy remains committed to the requirements associated with this ship and the objectives of this program.

Question. Are you looking at other options?

Answer. While the objectives of the DD–21 program remain valid, the Navy thinks it prudent to afford itself an opportunity to consider if a change in program strategy is warranted based upon the outcome of the respective defense strategy studies.

Question. Do you see a role in missile defense for the DD–21?

Answer. The Land Attack Destroyer (DD–21) Operational Requirements Document does not mandate a missile defense requirement for DD–21, and as such, DD–21 is not being designed for missile defense.

Missile defense is a transition technology that would be supported by the DD–21 hull form and could be incorporated into a follow-on DD–21 flight or a future CG–21 class ship.

Question. Admiral Clark, does delaying DD–21 affect other shipbuilding programs?

Answer. The decision to hold completion of DD–21 source selection in abeyance pending the results of the defense strategy studies does not affect other shipbuilding programs.

COOPERATIVE ENGAGEMENT CAPABILITY

Question. Admiral Clark, the Cooperative Engagement Capability (CEC) is a much anticipated program that promises increased situational awareness and better ship self-defense. However, as CEC finally enters into production, the technology is 15 years-old. Is there any effort within the Navy to take a "fresh" look at the program to ensure we are buying the most capable and cost-effective system?

Answer. Cooperative Engagement Capability (CEC), as a sensor network with integrated fire control, has capabilities beyond ship self defense. It promises enhancements to all major air and missile defense systems.

Although conceived 15 years ago, the technology of the CEC system, which recently completed Operational Evaluation, is essentially state of the art. The hardware has undergone several significant evolutions since the first experimental systems were tested. The shipboard AN/USG–1, which underwent operational testing at sea in 1994, weighed nearly 10,000 lbs. The current AN/USG–2 shipboard system weighs less than 3,000 lbs. including support equipment, while the AN/USG–3 aircraft version is less than 700 lbs. Through the use of open architecture and commercial off the shelf equipment, the system processors have been improved steadily from the Motorola 68040 seven years ago to the PowerPC RISC processor today. As with any warfighting system, initiatives are ongoing to improve and expand CEC capabilities, and to reduce the procurement and maintenance costs. Following are key efforts in progress or being considered:

—Development of a Low Cost Planar Array (LCPA) antenna. The LCPA is a 4 sided, flat faced array which will reduce antenna cost and improve reliability. It will also enable several classes of ships to operate with one antenna vice two for full 360 degree coverage.

—Development of an enhanced communications capability for an increased number of network nodes.

—Development of a next generation CEC for further reductions in size and weight with potential new architecture changes.

AMPHIBIOUS SHIP STATIONING AND LIFT

Question. Admiral Clark, Naval amphibious shipping seems to be nearly evenly divided between the Atlantic and Pacific fleet, although both the First and Third Marine Expeditionary Forces are focused on the Pacific and Asia. Why is there not a stronger commitment to amphibious sealift in the Pacific fleet?

Answer. The Navy's 38 amphibious ships are distributed to support the Unified Commanders' forward presence/peacetime engagement amphibious lift requirements, as well as the response times for a Major Theater War (MTW). Although shifting additional amphibious ships to the Pacific may enhance that theater's lift capability, it would severely impact support and response times to the Atlantic, Mediterranean, and Caribbean theaters.

The Department of the Navy has a validated requirement for 3.0 Marine Expeditionary Brigades amphibious lift. The Marine Expeditionary Brigade (MEB) is the smallest unit capable of forcible entry. Currently, our active available amphibious lift is limited to 2.1, respective to a fiscally constrained 2.5 MEB lift goal.

The Amphibious Ready Group (ARG) with an embarked Marine Expeditionary Unit (MEU) is the cornerstone for the forward presence/peacetime engagement mission. The MEU is also the leading element of an Amphibious Task Force (ATF) embarked with a MEB. The MEU, MEB, and contingency ATFs are drawn from any one of, or a combination of the three Marine Expeditionary Forces (MEFs) located at Camp Lejeune, North Carolina (II MEF), Camp Pendleton, California (I MEF) and Okinawa, Japan (III MEF).

The forward positioning of III MEF and amphibious forces in Japan, with follow-on forces deploying from San Diego, enables the Navy-Marine Corps team to meet the Pacific MTW requirements. Third Marine Regiment, the infantry regiment stationed on Hawaii, is a major subordinate element of Third Marine Division located on Okinawa. In time of crisis, this regiment will deploy to Okinawa by strategic air to link up with their Division.

Accordingly, to meet the Unified Commanders' forward presence/peacetime engagement amphibious lift requirements, as well as the DPG response times for a MTW, the Navy homeports Amphibious Ships in Norfolk, VA (17 ships), San Diego,

CA (16 ships) and Sasebo, Japan (4 ships). The Navy also maintains several amphibious ships in a reduced operating status in Hawaii, California, and Virginia.

NAVY SURFACE FIRE SUPPORT

Question. There is concern that the Navy seems to be backing away from their Navy Surface Fire Support (NSFS) commitment. Although the Cruiser Conversion Program (CCP) has remained intact, of the 22 cruisers in the original Program of Record scheduled to be back-fit with land attack 5 inch 62 tubes, only 9 of these cruisers are currently scheduled to receive them.

Is the Navy backing away from the littorals and NSFS?

Answer. No, the Navy is not backing away from the littorals or Navy Surface Fire Support (NSFS). Quite the opposite is true. Our cornerstone documents for Naval Operations, From the Sea and Forward . . . From the Sea, reflect Navy's intention to operate in the littorals. Development of NSFS systems are key to our ability to shape the littoral battle space and win.

Question. What alternatives does the Navy have to satisfy Marine Corps NSFS requirements if the DD–21 does not prove viable?

Answer. The Navy established a two-phased approach to satisfy the Marine Corps' Navy Surface Fire Support (NSFS) requirements. In the near-term, we are developing systems for installation on our Aegis-equipped destroyers and cruisers. These systems include the Extended Range Guided Munition, 5 inch/62 Mk 45 Mod 4 Gun, Land Attack Standard Missile, Naval Fires Control System, and Naval Fires Network. Collectively, these systems significantly improve the range, accuracy, and responsiveness of NSFS. In the far-term, we are developing the Advanced Gun System, Long Range Land Attack Projectile, and Advanced Land Attack Missile for DD–21. The systems improve even further our NSFS capability beyond our near-term efforts. These systems are only part of what makes the DD–21 a viable platform for the 21st century and fully answer Marine Corps' NSFS requirements.

QUESTIONS SUBMITTED BY SENATOR CHRISTOPHER S. BOND

DEFENSE SUPPLEMENTAL

Question. We understand the current defense supplemental request addresses the Navy and Marine Corps most pressing readiness needs. What are some additional unfunded requirements that you will be forced to address through reprogramming readiness and/or modernization funds for fiscal year 2001?

Answer. In addition to the urgent needs being addressed in the fiscal year 2001 budget supplemental now before Congress that are beyond the Navy's ability to fund internally, we have submitted to the Secretary of Defense a reprogramming request involving approximately $286 million to address critical shortfalls based on unforeseen requirements. Over 70 percent of the reprogramming request is for military compensation associated with improved recruiting and retention. The remainder of the unfunded requirements address support to operating forces, information technology needs, cost overruns related to closure of the Conventional Ammunition Working Capital Fund, and urgent engineering and manufacturing associated with aviation systems.

As proposed, almost all of the funds will use procurement accounts as a source and will come from lower priority line items. Aircraft Procurement, Navy will provide over 60 percent of the funding due to delays and cost growth in the SH–60R that makes fiscal year 2001 production not executable.

F/A–18E/F

Question. I was disappointed to see the numbers of appropriated F/A–18E/F super hornets reduced in fiscal year 2001, and I understand you may also reduce the quantity in your fiscal year 2002 budget. Based on the requirements to replace legacy carrier aircraft, I hope that you would reinstate the numbers of super hornets at the appropriate time in an effort to fully execute the approved multi-year agreement.

What are the Navy's plans for executing the approved multi-year plan for the Superhornet?

Answer. The Navy has a requirement for 548 F/A–18E/F aircraft. Last year the Navy entered into a multi-year contract for the production of 222 aircraft through fiscal year 2004. This contract provided flexibility to increase or decrease aircraft quantity (+/−6 aircraft) in fiscal year 2001 through fiscal year 2004 to meet emergent requirements. Unfortunately, current economic price adjustments and other

unforeseen costs required the Navy to decrease procurement by three aircraft in fiscal year 2001.

In the fiscal year 2002 amended budget, the Navy has increased F/A–18E/F procurement by three aircraft from 45 to 48.

T–45

Question. Pilot training is an important part of supporting both Navy and Marine Corps operational readiness. Indications are that the Navy is cutting back on the procurement of the T–45 Goshawk training systems, which will have a direct impact upon pilot training.

What are your plans for continuing to pursue the 234 T–45 aircraft that have been determined to be the optimal number to meet the operational pilot training rate?

Answer. The 234 T–45C aircraft total represents the number required to support the operational pilot training requirement until fiscal year 2035. The Navy completed a study in December 2000 that analyzed options available to support the pilot training rate through fiscal year 2035. These options included continued procurement of T–45C aircraft, extension of the T–2 Buckeye beyond which was previously envisioned, and follow-on trainer aircraft new start research and development requirements. The Navy is now conducting a prioritized review of programs as part of its fiscal year 2003 budget submission process. A focal point of this process will be a review of options available to meet the pilot training requirement. Continued procurement of the T–45C Goshawk training system will be among those options reviewed.

AV–8B

Question. The AV–8B Harrier is the mainstay for Marine close air support. The requirement for the conversion of older models to the all-weather night attack variants remains a high priority as explained to Congress.

Has the requirement for additional conversions changed?

Answer. No.

Question. Can we conclude that the Marine Corps needs additional AV–8Bs?

Answer. Yes. The current program will deliver the final Remanufactured Radar/Night Attack Harrier in June 2003. At the end of the current program there will be 14 less aircraft than required to meet operational and training requirements. The Marine Corps has a requirement for 14 additional remanufactured Harriers. This requirement does not account for attrition.

F/A–18 G

Question. The DOD is currently conducting an airborne electronic attack analysis of alternatives (AOA) study. My understanding is that the purpose of the AOA is to determine the best platform or systems to take over the electronic attack mission—a mission currently conducted by the Navy and Marine Corps EA–6B Prowler. I also understand that the services need to begin replacing the Prowler no later than 2010 due to the advanced age and heavy operating tempo of these aircraft.

Upon completion of the AOA does the Navy have plans to conduct a risk reduction effort prior to commencing a new development program?

Answer. The Navy currently has an EA–6B weapons system upgrade program called Improved Capabilities Three (ICAP III) which will achieve initial operational capability in early fiscal year 2005 and will keep the EA–6B relevant until its planned retirement date in fiscal year 2015. The ICAP III capabilities are the baseline for the ongoing Analysis of Alternatives (AoA) and will serve as a significant risk reduction tool as those capabilities are incorporated into a follow-on platform. The majority of the platforms being considered to host this electronic attack weapon system already exist or are in development with a significant amount of risk reduction inherent in each program. The combination of knowledge from the ICAP III system and selected host platform will enable the abbreviation of risk reduction requirements and rapid progression to the Electronic Attack Follow-on Program.

Question. Is there funding in place to support such an effort?

Answer. Funding requirements are being considered as part of fiscal year 2003 Program Review and Program Objective Memorandum build for fiscal year 2004.

Question. What specific tasks are important to the Navy in reducing the risk of a follow-on system?

Answer. Tasks important in reducing the risk of a follow-on system include:

—Integration of a high power jamming system with existing host platform systems (flight controls, avionics, navigation, communication and weapons),

—Electromagnetic interference,

—Quantifying and understanding the shielding and blanking requirements of system-to-platform integration, and
—Dynamic flight envelope exploration of the system/platform combination.

QUESTIONS SUBMITTED BY SENATOR KAY BAILEY HUTCHISON

TRAINING RANGES

Question. I understand the Navy is looking at different options to replace the Vieques training range; however, I am concerned about the quality of training our deploying units will be able to conduct until a new site is found. During the next two years, will the Navy and Marine Corps be able to conduct the full range of training exercises required at Vieques to send our personnel in harm's way? What other ranges are being used to make up for the limitations placed on Vieques operations?

Answer. Over the next two years, Atlantic Fleet's naval forces intend to use Vieques as we are today. When Vieques is unavailable, Atlantic Fleet's naval forces conduct limited live fire training at other ranges; however, the training opportunities are less than optimal for completing invaluable integrated battle group training. For example, air-to-ground bombing with live ordnance can be conducted at Eglin and Pinecastle ranges in Florida, but those ranges cannot support combined arms exercises from the sea. They also have altitude and maneuvering restrictions that result in diminished realism. Amphibious operations and ground maneuvers can be conducted at Camp Lejuene and Onslow Bay, but those locations cannot support Naval Surface Fire Support or combined Naval Force exercises across the full range of mission areas.

T–45

Question. I read a study the Navy completed last November concerning Training aircraft requirements. It showed that there was a shortfall in T–45 training aircraft and recommended continuing to build the T–45C and upgrading the older T–45's to the glass cockpit configuration.

What are the Navy's intentions concerning T–45 production and upgrades? Is the age of the T–2 negatively affecting its readiness and quality of student training?

Answer. The Navy completed a strike training aircraft requirement study in November 2000 that analyzed options available to meet the strike pilot training requirement through fiscal year 2035. Options the study analyzed included: continued procurement of T–45C aircraft, extension of the T–2 Buckeye beyond which was previously envisioned, and follow-on trainer aircraft new start research and development requirements. The training aircraft study will be used as a planning tool for Navy's future budget submission process. Continued T–45C procurement and the upgrade of the T–45A analog cockpit to the T–45C digital configuration will be reviewed during future budget process.

The age of the T–2 is currently not affecting the readiness or quality of student training. The T–2 continues to meet aircraft ready-for-training goals. As with many aging systems, T–2C parts obsolescence and supportability for out of production items will become increasingly difficult in the future. The Navy will continue to assess this and review all factors to continue to meet the strike pilot training requirement. The quality of pilot training is not being affected, nor will it be compromised. Navy continues to produce the finest Naval Aviators in the world at both NAS Kingsville, Texas where student pilots fly the T–45A and in NAS Meridian, Mississippi where students fly both the T–2C and the T–45C.

Since Texas is the Headquarters for Naval Mine Warfare, I take special interest in ensuring that this often overlooked fleet obtains the resources it requires.

Question. What is the plan to replace the U.S.S. *INCHON*?

Answer. U.S.S. *INCHON* is approaching the end of its service life. The Navy plans to decommission *INCHON* around 2005, however the exact plan will be reviewed as a part of the Program Review for 2003. In order to understand all options, a study to determine the approximate cost of extending U.S.S. *INCHON*'s service life is underway, and should be completed in December of 2001.

Another study to evaluate the particular future requirement for a follow-on MCS ship is being done. This study, to be completed in the fall, will identify both requirements and options for replacing U.S.S. *INCHON*.

Question. Do you anticipate changes to the Mine Sweeper basing/deployment plan?

Answer. No changes to the Navy's Mine Sweeper basing/deployment plans are anticipated.

RETENTION

Question. I'm happy that the Navy appears to be meeting its recruiting goals, however, I understand that Non Commissioned Officer (NCO) retention remains a concern.

What is the Navy doing to retain these experienced technicians and managers? What is the current retention status of Aviation and SEAL junior officers?

Answer. The Navy has developed long-range reenlistment goals that reflect our vision to mold the force profile to support and sustain a 75.5 percent top six pay grade Enlisted Program Authorization (EPA) requirement which reflects anticipated manpower needs based on future technology and weapons platforms.

NAVY ENLISTED REENLISTMENT RATES

[In percent]

FYTD (Oct-May)	Zone A (<6 years)	Zone B (6–10 years)	Zone C (10–14 years)
Fiscal year 1999	47.1	60.4	83.1
Fiscal year 2000	51.3	62.6	83.2
Fiscal year 2001	59.6	67.6	84.2
Long-range Goal	57	69	89

While shy of long-range goals, fiscal year 2001 reenlistment rates for mid-career (Zone B) and career (Zone C) non-commissioned officers (NCOs) have shown steady improvement over the same time period in the past two years. To combat aggregate enlisted personnel shortfalls, and as a long-term solution, we have focused significant retention efforts on Sailors in Zone A, resulting in significant improvement in Zone A reenlistments. To counter specific skill shortfalls, we maintain a robust Selective Reenlistment Bonus (SRB) program that has helped retain Sailors with high demand skills in the near term.

Ultimately, as we continue building on enlisted retention successes of the last two years, we must increase the number of mid-career and career NCO reenlistments for third (and subsequent) tours.

SEAL officers are being retained at 60 percent against a requirement of 74 percent. Enactment and implementation of Special Warfare Officer Continuation Pay, as well as other compensation enhancements in the National Defense Authorization Acts of the past two years, coupled with Navy Special Warfare and Navy-wide quality of service initiatives have had a positive impact on SEAL retention efforts.

Through the third quarter of fiscal year 2001, aggregate aviator retention is at 38 percent against a requirement of 42 percent. The fiscal year 2001 aviation bonus program has contributed significantly to maintaining retention rates above the all time low of 31 percent experienced in fiscal year 1999.

QUESTIONS SUBMITTED TO GENERAL JAMES L. JONES

QUESTIONS SUBMITTED BY SENATOR DANIEL K. INOUYE

JOINT STRIKE FIGHTER

Question. General Jones, would you comment on the importance of the JSF to the Marine Corps?

Answer. The Joint Strike Fighter is the future of Marine Corps TACAIR. As this nation's premier expeditionary force, the Marine Corps routinely depends on its tactical air forces to contribute a significant portion of the firepower needed to succeed on the modern battlefield. JSF, with its combination of lethality, stealth, and operational flexibility offers exactly what the Marine Air Ground Task Force (MAGTF) Commander needs. By the time JSF arrives in 2010, the need will have become critical. Over the next decade, the Corps' fleet of F/A–18's and AV–8's will approach or exceed the end of their service life while cost of ownership will increase dramatically and issues of operational obsolescence will emerge in the face of ever more lethal threats. Keeping JSF on track is key to maintaining the Marine Corps' well-deserved credential as the CINC's joint warfighting force of choice.

V–22

Question. General Jones, the recent—and tragic—problems that have occurred in the V–22 programs may have undermined confidence in the aircraft. Will you describe for us the path ahead for the V–22 program that will rebuild confidence in the aircraft and solve these problems?

Answer. Currently the V–22 Program is being restructured based upon recommendations from the Panel to Review the V–22 Program and acquisition leadership. The planned "Way Ahead" for the V–22 is a safe, conservative, event driven plan. Naval Air Systems Command is detailing this conservative path to return to flight. It is predicated on corrections of known deficiencies supported by an independent technical assessment of designs and processes to minimize additional unknowns. The redesigns will be fully assessed by Developmental Test followed by an Operational suitability assessment.

The return to full flight operations and the plan to restore confidence in the V–22 is based upon the following five phases:

Phase 0.—Commence Technical Assessment and Complete Rigorous Flight Readiness Review.

Phase 1.—Resume Testing with EMD (MV and CV) Aircraft—Augment with LRIP Aircraft as Necessary.

Phase 2.—Resume VMMT 204 Training Operations and Production Acceptance Flights.

Phase 3.—Stand-up MV–22 Fleet Squadron/CV–22 Training Squadron at Kirtland AFB.

Phase 4.—Deploy First MV–22 Squadron/CV–22 Operational Employment.

We fully expect this will allow the Marine Corps to field a safe, reliable combat assault aircraft for the 21st Century battlefield.

Question. General Jones, are you satisfied that the supplemental request for more R&D funds for this program is sufficient?

Answer. The Marine Corps fully supports the V–22 restructure plan as submitted by OSD in the fiscal year 2001 Supplemental Request. The additional $80 million of RDTEN provided by this plan is considered sufficient to execute the "way ahead" initiatives for the remainder of this fiscal year and begin work on 2 CV–22 aircraft to meet SOCOM's requirements.

AMPHIBIOUS SHIP STATIONING AND LIFT

Question. General Jones, does the Marine Corps require additional amphibious shipping in general, and specifically in the Pacific theater?

Answer. Naval amphibious ships combined with embarked Marines provide forward presence and flexible crisis response forces for employment in support of foreign policy objectives. These forces provide the most formidable amphibious forcible entry capability in the world. Amphibious lift requirements are formulated to support the national military strategy, satisfy combat surge requirements, and can also be tailored to meet real world day-to-day commitments.

The warfighting requirement, the capability the Marine Corps strives to provide to our nation, remains at 3.0 Marine Expeditionary Brigade Assault Echelons and equates to 14 Amphibious Ready Groups. The requirement for an amphibious force structure plan that supports lift for 3.0 Marine Expeditionary Brigade Assault Echelons, as stated in the Department of the Navy's 1990 Integrated Amphibious Operations and USMC Air Support Requirements Study, the 1992 Mobility Requirements Study, and reemphasized in Congressional testimony and the Secretary of Defense's 26 June 2000 Report On Naval Vessel Force Structure Requirements, remains a priority requirement.

Fiscal constraints, however, have limited amphibious lift to a programmatic goal of 2.5 Marine Expeditionary Brigade Assault Echelons that equates to 12 Amphibious Ready Groups. This capability will be achieved with active amphibious ship force structure upon delivery of the twelfth LPD 17 class ship. In the meantime, maintaining LKAs and LSTs in a reduced operating status called the Amphibious Lift Enhancement Plan is a temporary fix meant to fill the gap between today's shortfall and the delivery of the LPD 17 ship class. The shortfall in active amphibious ships remains an area of concern. Important to note is that the U.S. Navy is responsible for determining the homeport of amphibious ships.

NAVY SURFACE FIRE SUPPORT

Question. Are you satisfied with the current Navy Surface Fire Support (NSFS) capability? Are you satisfied with the Navy interim plan, with regard to NSFS capabilities, of 9 cruisers and 27 destroyers? What impact would the cancellation of the

DD–21 have on the viability of the Marine Corps to execute its Expeditionary Maneuver Warfare Concepts?

Answer. As the Navy/Marine Corps team continues to field our 21st century expeditionary warfare capability, we re-affirm the critical role of naval surface fires in the success of Expeditionary Maneuver Warfare. It is important that we deploy a full spectrum of responsive, lethal, and accurate naval weapon systems to complement the flexible warfighting capability of our maneuver forces.

The Marine Corps has in the past, and continues today to support the Navy's two-phased land attack weapons development approach for meeting near- and far-term naval fires requirements for supporting expeditionary operations. Near-term programs such as the 5 inch/62 gun, Extended Range Guided Munitions and the Land Attack Standard Missile will provide an enhanced naval surface fire support capability, but will not meet all of the range and lethality requirements for supporting the Marine Air Ground Task Force in expeditionary operations. In the far-term, the 155 mm Advanced Gun System, with a family of precision-guided and ballistic ammunition, and the Advanced Land Attack Missile, with a family of general use and specialty warheads, will meet these requirements. Both the Advanced Gun System and the Advanced Land Attack Missile are systems designed for the DD–21 class of ships.

The capabilities provided by the DD–21 and its associated systems remain vital to realizing the full potential of Expeditionary Maneuver Warfare and the conduct of expeditionary operations and sustained operations ashore in a fluid, non-linear battle space.

QUESTIONS SUBMITTED BY SENATOR THAD COCHRAN

Question. General Jones, I have been briefed that during the 1999 incident in East Timor the 3rd Marine Expeditionary Force did not have sufficient amphibious assault lift capability to rapidly deploy from Okinawa, Japan to Darwin, Australia. Do you have any concerns with the existing strategic lift capability?

Answer. Naval amphibious ships combined with embarked Marines provide forward presence and flexible crisis response forces for employment in support of foreign policy objectives. These forces provide the most formidable amphibious forcible entry capability in the world. Amphibious lift requirements are formulated to support the national military strategy, satisfy combat surge requirements, and can also be tailored to meet real world day-to-day commitments.

The warfighting requirement, the capability the Marine Corps strives to provide to our nation, remains at 3.0 Marine Expeditionary Brigade Assault Echelons and equates to 14 Amphibious Ready Groups. The requirement for an amphibious force structure plan that supports lift for 3.0 Marine Expeditionary Brigade Assault Echelons, as stated in the Department of the Navy's 1990 Integrated Amphibious Operations and USMC Air Support Requirements Study, the 1992 Mobility Requirements Study, and reemphasized in Congressional testimony and the Secretary of Defense's 26 June 2000 Report On Naval Vessel Force Structure Requirements, remains a priority requirement.

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QUESTIONS SUBMITTED BY SENATOR CHRISTOPHER S. BOND

DEFENSE SUPPLEMENTAL

Question. We understand that the current defense supplemental request addresses the Navy and Marine Corps most pressing readiness needs. What are some additional unfunded requirements that you will be forced to address through reprogramming readiness and/or modernization funds for fiscal year 2001?

Answer. While the fiscal year 2001 Supplemental Request addresses the Marine Corps' most critical "must fund" requirements, it does not cover approximately $27 million still needed to fund other critical requirements in our military personnel (MPMC) and operation and maintenance (O&MMC, O&MMCR) accounts. The Marine Corps has requested approval, within the DOD Omnibus Reprogramming Re-

quest, to transfer $27 million from our ground equipment procurement account (PMC) to cover these critical requirements. Specifics are as follows:

"Must Pay" Bills Not Covered in the Fiscal Year 2001 Supplemental Request

(In Millions)

MPMC:	
Enlisted Average Strength Overexecution O&MMC	$21.0
IT Pay Raise	1.9
Reduction in Govt. of Japan Burdensharing	2.3
Collateral Equipment, Hospital Pt., Quantico O&MMCR	1.6
IT Pay Raise	.2
TOTAL	27.0
PMC:	
Target Location Designation Handoff System	−11.9
Transportation Coordinators Auto Info Movement Sys	−1.3
Combat Vehicle Appended Trainer	−9.8
Forklifts	−4.0
TOTAL	−27.0

F/A/–18 E/F

Question. I was disappointed to see the numbers of appropriated F/A–18 E/F super hornets reduced in fiscal year 2001, and I understand you may also reduce the quantity in your fiscal year 2002 budget. Based on the requirements to replace legacy carrier aircraft, I hope that you would reinstate the numbers of super hornets at the appropriate time in an effort to fully execute the approved multi-year agreement.

What are the Navy's plans for executing the approved multi-year plan for the Super Hornet?

Answer. All decisions on F/A–18E/F procurement are made exclusively by the Navy. The Marine Corps has made the decision to skip this current generation of F/A–18E/F aircraft and wait for introduction of the Joint Strike Fighter.

T–45 TS

Question. Pilot training is an important part of supporting both Navy and Marine Corps operational readiness. Indications are that the Navy is cutting back on the procurement of the T–45 Goshawk training systems, which will have a direct impact upon pilot training.

What are your plans for continuing to pursue the 234 T–45 aircraft that have been determined to be the optimal number to meet the operational pilot training rate?

Answer. The 234 T–45 aircraft total represents the number required to support the operational pilot training requirement until fiscal year 2035. The Navy completed a study in December 2000 that analyzed options available to support the pilot training rate through fiscal year 2035. These options included continued procurement of T–45 aircraft, extension of the T–2 Buckeye beyond which was previously envisioned, and follow-on trainer aircraft new start research and development requirements. The Navy is now conducting a prioritized review of programs as part of its fiscal year 2003 budget submission process. A focal point of this process will be a review of options available to meet the pilot training requirement. Continued procurement of the T–45C Goshawk training system will be among those options reviewed.

AV–8B

Question. The AV–8B Harrier is the mainstay for Marine close air support. The requirement for the conversion of older models to the all-weather night attack variants remains a high priority as explained to Congress.

Has the requirement for additional conversions changed? Can we conclude that the Marine Corps needs additional AV–8Bs?

Answer. Fiscal year 2001 Congressional enhancement procured two of the 16 additional Remanufactured Harrier requirements as identified by the DoN Strike Master Plan. The USMC maintains the requirement for 14 additional Remanufactured Harriers. Presently the inventory of new production Radar variant Harriers is 24 and there are 74 Remanufactured Harriers delivered or on contract. This will bring

the total inventory of Radar variants to 98 by the time of final delivery in 2003. The 14 additional Remanufactured Harriers will raise the total to 112 in order to fill the current squadron PAA (7 squadrons × 16 aircraft) without accounting for attrition or pipeline.

F/A–18 G

Question. The DOD is currently conducting an airborne electronic attack analysis of alternatives (AOA) study. My understanding is that the purpose of the AOA is to determine the best platform or systems to take over the electronic attack mission—a mission currently conducted by the Navy and Marine Corps EA–6B Prowler. I also understand that the services need to begin replacing the Prowler no later than 2010 due to the advanced age and heavy operating tempo of these aircraft.

Upon completion of the AOA does the Navy have plans to conduct a risk reduction effort prior to commencing a new development program?

Answer. The Navy currently has an EA–6B weapons system upgrade program called Improved Capabilities Three (ICAP III) which will IOC in early fiscal year 2005 and will keep the EA–6B relevant until its planned retirement date of 2015. The ICAP III capabilities are the baseline for the ongoing Analysis of Alternatives (AoA) and will serve as a significant risk reduction tool as those capabilities are incorporated into a follow-on platform. The majority of the platforms being considered to host this electronic attack weapon system already exist or are in development with a significant amount of risk reduction inherent in each program. The combination of knowledge from the ICAP III system and selected host platform will enable the abbreviation of risk reduction requirements and rapid progression to the Electronic Attack Follow-on Program.

Question. Is there funding in place to support (a risk reduction) effort (prior to commencing a new development program)?

Answer. Funding requirements are being considered as the Department of the Navy develops the fiscal year 2003 and fiscal year 2004 budgets.

Question. What specific tasks are important to the Navy in reducing the risk of a follow-on system?

Answer. The Navy is concerned with the integration of a high power jamming system with existing host platform systems (flight controls, avionics, navigation, communication and weapons). Also, the Navy has additional concerns with Electro-Magnetic Interference (EMI), quantifying and understanding the shielding and blanking requirements of system-to-platform integration, and dynamic flight envelope exploration of the system/platform combination.

QUESTIONS SUBMITTED BY SENATOR KAY BAILEY HUTCHISON

Question. General, does the supplemental appropriations request provide enough funding for the necessary redesign and testing for the V–22 program?

Answer. Yes, the fiscal year 2001 supplemental appropriations request does provide sufficient RDT&E,N funding to support the necessary redesign and testing for the V–22 program for fiscal year 2001.

Question. A few months ago it sounded as if the Marine Corps commitment toward the vertical take off version of JSF was wavering. Does this program remain a Marine priority? If the vertical lift version proves to be too expensive, would the Marine Corps buy the Navy version instead?

Answer. The CNO and I are firmly committed to the Joint Strike Fighter. We agree that JSF will be a vital element for our expeditionary Navy and Marine team, a stealthy aircraft able to operate from carriers, large deck amphibious ships, expeditionary sites ashore or main operating bases. I am also firmly committed to the vision of a JSF STOVL aircraft for the future all V/STOL force in Marine aviation. The JSF program is delivering precisely the kind of weapons system that the Congress has repeatedly called for: a truly joint aircraft that avoids unnecessary duplication in developments yet also provides leap ahead technology at a low cost, highly reliable, and interoperable system. We need new aircraft beginning in fiscal year 2008, and I expect that aircraft to be JSF STOVL. However, should a currently unforeseeable technical/affordability challenge preclude introducing an "acceptable" JSF STOVL aircraft in fiscal year 2008, then it is logical for us to accept JSF Navy CV variants until the program delivers the STOVL variant that Marines require.

JSF is an important national program, not only for the Navy, Marines, and Air Force to fly in the increasingly threatening skies of the 21st century, but also for our allies who have shown strong interest with their capital investment in the program. JSF has the potential to deliver up to 6,000 aircraft for America and our friends, thus potentially increasing further the U.S. industrial base. There is no for-

eign aircraft development that can compete with JSF. I support JSF for reasons that are greater than the valid requirement to equip Marines with a great weapon system.

Question. We are constantly hearing about the "Transformation" of our military to meet emerging threats. Would you please explain your understanding of "Transformation" as it relates to the Marine Corps and its relationship to readiness and modernization requirements?

Answer. Unlike the other services that have undergone a major restructuring in response to the changing strategic and operational landscapes of the post Cold War world, the Marine Corps has been assigned a role and organized, trained, and equipped as an expeditionary force in readiness that is as relevant today as it was in 1952 when Congress established in law the role of the Marine Corps. The Marine Corps has neither had to downsize, nor reshape itself, as a result of the Cold War. Instead, the Marine Corps has continued to follow an evolutionary plan for developing additional capabilities needed to hone its ability to conduct its assigned role against the changing threat in the 21st century. One thing is clear: the strategic uncertainty that has followed in the wake of the end of the bi-polar era demands military forces different from the heavy forces that comprised the bulwark of U.S. conventional defense for the last five decades. The Marine Corps, true to its heritage and already trained, organized, and equipped for operations across the spectrum of conflict, stands ready to continue its role as the nation's "total expeditionary force in readiness".

Absent a change of role as a result of the end of the Cold War, the Marine Corps has sought to modernize its forces through selective acquisition of new equipment that takes advantage of emerging technologies such as precision weapons, information technology, new engines, stealth, etc. In some cases—such as the Light Weight 155 mm Howitzer—the intent is to replace existing equipment that is past its service life. In other cases—such as the MV–22 and AAAV—the ideas for the technologies were developed during the 1980s to enable new operational concepts, while the technologies to build the equipment have not been sufficiently developed until 20 years later. Equipment modernization will provide a major increase in the depth and speed that the Marine Corps can carry out its assigned role within a naval expeditionary force. It will result in potentially revolutionary increased capabilities, but without a major restructuring and transformational change in the operating forces of the Marine Corps.

Accordingly, modernization as used by the Marine Corps explicitly means reshaping the Marine Corps capabilities to meet future missions through the selective acquisition of new equipment that will enable the execution of Expeditionary Maneuver Warfare in support of emerging joint warfighting concepts. Modernization will lead to significant increases in capability. However, because it is part of an institutionalized and continuous process of Marine Corps combat development, there is no requirement for a major shift in the way our service trains, organizes, and equips Marine Corps operating forces implied in the term "transformation".

To the Marine Corps, transformation is a continuing process that spans decades of innovation and experimentation with the implementation of new systems, operational and organizational concepts. It involves the development of new operational, concepts, refinement of enabling capabilities through experimentation, and the development of new organizations, tactics, techniques, procedures, and technologies as necessary to turn these concepts into warfighting capabilities.

Question. Please provide an update on the enhanced Maritime Prepositioning Force. What is the funding status of ship number three?

Answer. The first MPF(E) ship, the USNS Harry L. Martin, is assigned to Maritime Prepositioning Squadron One (MPSRON 1) in the Mediterranean.

Conversion of the second ship, the USNS Stockham, was recently completed by NASSCO, San Diego, CA. The USNS Stockham completed load out in July 2001 and will join MPSRON 2 in Diego Garcia.

Our last MPF(E) ship to be fielded, ship number three, the USNS Wheat/GTS Bazilaya, has a new delivery date scheduled for late November 2001. Military Sealift Command (MSC) negotiated a contract modification (firm, fixed price vice cost plus contract) with Bender Shipbuilding (Mobile, AL) and additional funding of $11 million was provided from the National Defense Sealift Fund (NDSF) for the USNS Wheat/GTS Bazilaya conversion.

Question. Please explain the mission of the Blount Island complex and its role in supporting U.S. national security interests?

Answer. The mission of the Blount Island Complex focuses on attainment, maintenance, and sustainment of all requirements in support of the Marine Corps' Maritime Prepositioning Ships (MPS). Maritime Prepositioning Force (MPF) Maintenance Cycle operations conducted at Blount Island are vital to maintaining the

readiness and continued capability of the MPF program. Blount Island is recognized by DOD, the Joint Staff and the Commanders-in-Chief (CINCs) as a vital national strategic asset, through its role in support of the MPF program. Since 1986, the MPF Maintenance Cycle for prepositioned equipment and supplies has been conducted at Blount Island. Blount Island is part of the Strategic Enabler entitled "Strategic Mobility", and is an asset that 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.

SUBCOMMITTEE RECESS

Senator INOUYE. The subcommittee will stand in recess until June 27, when we will hear from the Secretary of Defense, the Honorable Donald Rumsfeld. Thank you very much.

[Whereupon, at 11:37 a.m., Wednesday, June 20, the subcommittee was recessed, to reconvene subject to the call of the Chair.]

DEPARTMENT OF DEFENSE APPROPRIATIONS FOR FISCAL YEAR 2002

WEDNESDAY, SEPTEMBER 5, 2001

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

The subcommittee met at 10 a.m., in room SD–192, Dirksen Senate Office Building, Hon. Daniel K. Inouye (chairman) presiding.

Present: Senators Inouye, Hollings, Leahy, Feinstein, Kohl, Stevens, Cochran, Specter, Domenici, Bond, Shelby, and Hutchison.

DEPARTMENT OF DEFENSE

OFFICE OF THE SECRETARY OF DEFENSE

STATEMENT OF HON. DONALD H. RUMSFELD, SECRETARY OF DEFENSE

ACCOMPANIED BY DR. DOV ZAKHEIM, COMPTROLLER

OPENING STATEMENT OF SENATOR DANIEL K. INOUYE

Senator INOUYE. Mr. Secretary, General Shelton, we welcome you here this morning to discuss the Department of Defense's (DOD) budget request for fiscal year 2002.

General Shelton, we recognize that this is likely to be your last appearance before the subcommittee, and so on behalf of the committee I want to thank you for your service to our Nation. You have been a great military leader, a soldier's soldier, and a true defender of military personnel. Your initiatives to reform military pay and health care will serve as your legacy for many, many years the men and women of the Armed Forces will remember what you have done for them. Thank you.

General SHELTON. Thank you, Mr. Chairman.

Senator INOUYE. Mr. Secretary, although I cannot truly say I remember, I would suspect this is not your first appearance before this committee.

Secretary RUMSFELD. No, sir.

Senator INOUYE. Well, I do believe it is the first time in 25 years. We will welcome you this morning, and look forward to hearing your candid assessments of the state of our military forces, and justification for your budget request. The fiscal year 2002 amended budget request before this subcommittee is for $319.4 billion in budget authority. This is $26.3 billion more than that was provided in 2001, and $18.2 billion more than what was requested in February.

Unfortunately, the budget resolution did not provide the increased funding requested in your amended budget. Instead, it stipulated that the additional $18 billion in defense funding could only be provided if funds remained above and beyond the Medicare and social security surpluses. According to the Congressional Budget Office (CBO) and the Office of Management and Budget (OMB), since the Bush administration took over, a slumping economy, a large tax cut, have eliminated all the available funds.

Mr. Secretary, this leaves this committee and the Senate in an untenable position. The allocation for this subcommittee is $20.8 billion below your request. If we are to abide by this allocation, we must cut your request by this amount. The only way for us to live within this level would be to decimate your modernization budget or gut your readiness funding and eliminate the pay raises and some force structure, and Mr. Secretary, I want you to know that I will not be a party to that.

I have served on this subcommittee for nearly 30 years. I have shared the responsibility for chairing it with Senator Stevens for the past 13 years, and Senator Stevens has been doing the same for the past 21 years. Together, we saw the post Vietnam drawdown, the Carter cuts and then his reversal, we witness the Reagan build-up, when much good was done for defense, but a great deal was wasted as the administration failed to make careful choices. We saw the post cold war drawdown and procurement holiday begun by President Bush and continued by the Clinton administration, and then we saw return to minimal growth at the end of the last administration, but at a level much lower than what was needed.

Now we are faced with an administration that says it wants to increase defense, but allocated all the available resources from a large tax cut, so we are told. If we want to provide what is needed for defense, we must do so by cutting social security and Medicare revenues. Mr. Secretary, many of our colleagues are going to be reluctant to cut into Medicare and social security to pay for defense. Politically, they worry that the voters will penalize them for raiding social security. I, for one, believe it is essential that we provide the resources necessary for defense. I am old enough to remember what happens when we fail to take care of defense. I saw the attack on Pearl Harbor. I remember June 25, 1950, when the North Koreans attacked. There is one lesson I will never forget. If we want to prevent war, we must be prepared for war.

It would be easy to play politics on this issue, but this is too important, and so I will not take part in any effort which would shortchange national defense for political gain. Today, fewer than 1 percent of all Americans serve in the military. They protect the remaining 99 percent. It is the duty of the Congress and the administration to make sure they are well-paid, trained, and ready, and equipped with the finest weapons to serve as a warning to any potential adversary that we will defend freedom throughout the world.

Mr. Secretary, as we receive your testimony today, we hope not to focus on the political debate of spending social security for defense, but rather on the nuts and bolts of your request. Many of my colleagues believe your request is excessive. They argue that 9

percent is too much growth. They question why you need to increase missile defense by $3 billion in 1 year. They want to know why you have requested a 55-percent increase in the defense health program. They wonder why a 5-percent across-the-board pay raise for the military is necessary when the services have met their recruiting and retention goals during each of the past 2 years.

Mr. Secretary, I pledge to you that we will do everything we can to get you the funding that you need, but we need your help. In your words today, you need to convince these skeptics that the $319 billion request before us is essential to maintain readiness, and that it invests in the right mix of programs for the future.

So Mr. Secretary, General Shelton, this is a challenging assignment, but we are confident that you are up to the task, and we look forward to your testimony.

With that, I want to defer to my dear colleague from Alaska, Senator Stevens, for any comment he wishes to make.

STATEMENT OF SENATOR TED STEVENS

Senator STEVENS. Thank you very much, Mr. Chairman, and I apologize for not being here on time. I do join the chairman in welcoming you here today, gentlemen, Mr. Secretary, Chairman of the Joint Chiefs, and Under Secretary Zakheim. We have long followed this practice of asking the Secretary to come before us prior to our markup of the bill to give the Secretary the last word. I do think we ought to start off by commending you, Mr. Secretary, for having the courage to take the time to closely examine and assess the programs of the past and to try and see what we can do to determine what the future requirements of our country will be for defense.

No one welcomes that tough scrutiny, but I believe a challenge to the status quo is always in order, and it was the right decision to make at the right time and for the right reasons, and we welcome your assessment.

General Shelton, I join the chairman, of course, in thanking you for your service and regretting that this may be the last time you are here. God only knows what is going to happen this fall. You may be back, but I hope not. Not that I do not want you back, but I just do not want to continue this process for too long.

We are at a very strange time now. I applaud the statement the chairman has just made. I do believe it is the time for us to assess the needs of the Nation in the future. I think we all have to keep in mind the enormous time that it takes now to deploy systems or make changes in the military structure. The decisions that we will make, based upon your request and your findings, will affect generations to come. As a matter of fact, I would predict that less than half of the members of this panel will be here when we deploy the systems that you are working on now. It is taking as long as 20 years now to get some of the major systems to our forces. Since the end of the cold war, Senator Inouye and I have urged a successive number of administrations to pay close attention to the Pacific. I commend all of you gentlemen for the emphasis you have placed on that portion of the world, and look forward to hearing your views and priorities for defense in that region.

Many are quick to point to China as the potential adversary should we develop new military concepts. As one who served in

China, and watched China for many years now, I do not think we should come to that automatic conclusion that they will necessarily be an adversary of our country in the future, but the systems that we are going to review here today are important not only for the concept of the Pacific, but for our whole global role now as a nation, and from India to North Korea, to Australia, throughout the world, the complexities of our future require that we work together without regard to politics, as the chairman has said.

I join everyone in regretting that we are in a situation where the budgets are going to be tight.

Mr. Secretary, I had the honor to be present on Monday in Berlin, the meeting of what they call the Atlantic Bridge. A group of our military officers and the officers and former officers of the German Army meet together annually to assess the future, and it was really a sobering time to review the problems of Europe as they affect our future, and to try and comment upon our view of what is going on over there now.

We have never really shied away on this subcommittee from tough choices, and we welcome the opportunity you are going to give us to make some. I think that the need to recast our military for the future is obvious. The need for really tough decisions on what weaponry we must prepare to assure that we meet the future needs of our country is also obvious, but I hope that we can have the working relationship with you and your colleagues that will assist us in developing this budget now on a bipartisan basis.

My last comment would be that I do sincerely join the chairman with regard to his comments concerning the surplus problem. We are dealing with estimates, and the margin of error on any estimate of the complexity that we are dealing with here in terms of defense is such that the differences between OMB and CBO are immaterial, and the statistical comparison of those estimates could lead us just as easily to a conclusion that there still is a surplus, as well as the conclusion that we may face the problem of whether we should invade it in order to assure that our defenses for the future are secure.

I intend to support the chairman in his comments, and to work to try and make sure that we do set off now in this first budget after—you know, this was our year for the goal of a balanced budget, Mr. Secretary, but if we go forward now in 2002 on a basis of continuing the decline in moneys that are available for our defense, I think it will be a sad mistake for future generations.

I welcome the opportunity to work with you, Mr. Chairman, and with you, Mr. Secretary, and the Joint Chiefs, and the Under Secretary and Comptroller. It is going to be a tough call, but I look forward to working with you.

Thank you, Mr. Chairman.

Senator INOUYE. Thank you very much, Senator Stevens. Senator Leahy.

STATEMENT OF SENATOR PATRICK J. LEAHY

Senator LEAHY. Thank you, Mr. Chairman. I want to welcome Secretary Rumsfeld here. Looking around, Mr. Secretary, this committee, I see of course both Senator Inouye and Senator Stevens as well as Senator Hollings and Senator Domenici. We were all serv-

ing here when you were first Secretary of Defense. You have not aged, but some of us have, so I welcome you back.

And I would say General Shelton, you have done this country proud in your service as Chairman of the Joint Chiefs, not only here in the United States, but we always look to the military for the best, especially at your level, but just by the nature of your role you are in effect a worldwide ambassador.

I know you have traveled all over the world. You are what many other countries from their leaders on down see as the reflection of the military when they see the Chairman of the Joint Chiefs come, and that reflection has been a very good one from all the services, and I appreciate the amount of time and commitment you have made, and your family has made in your career, a long and distinguished career. I want to say it on the floor, but I did want to say that with you here, how much I appreciate it.

General SHELTON. Thank you, sir.

Senator LEAHY. I am also going to have a number of questions, Mr. Chairman, on the budget, land mines and military modernization. I should say initially I was troubled by the reports which came out on Sunday that the administration may turn a blind eye to China's nuclear weapons modernization for the sake of selling its missile shield plans. Mr. Secretary, I hope you will clarify the administration's policy on possible Chinese nuclear buildup. I would also ask the chairman's consent that an editorial from the Rutland Herald in Vermont on Tuesday, September 4 be included.

Senator INOUYE. Without objection.

[The information follows:]

[From the Rutland Herald, Sept. 4, 2001]

BIZARRE THINKING

The Bush administration is considering a policy shift with regard to China that raises Kissinger-style realpolitik to a new level.

The New York Times reported on Sunday that Bush was willing to set aside its objections to a Chinese missile buildup in exchange for acceptance by China of a U.S. missile shield.

The logic of this position is so bizarre that it can be explained only by the confluence within the Bush administration of two dangerous ideas. The first is Bush's idea that missile defense must trump all other foreign policy and defense priorities. The second is that acquiescing in the militarization of China will make for stable relations, which would be in America's economic interest.

This policy shift was revealed to the press by "senior administration officials." Such revelations usually occur either as an attempt to torpedo a policy by making it public or as a trial balloon to test public reaction. Another motive may be to send a signal to China that the Bush administration is really its friend even if public opinion in America is not yet ready to go along.

It's not clear whether the administration will try to advance this new policy in the open. On Monday, Bush's press spokesman said it was still U.S. policy to discourage the development of nuclear weapons. In other words, Bush hasn't officially changed his policy yet, but he may be preparing to do so.

It is peculiar logic, however, to encourage the development of nuclear weapons by China in order to gain approval for the defensive shield designed to shoot down nuclear weapons. The unnamed senior officials explained the logic this way: China is going to develop its missiles anyway, so it doesn't do us any good to make the Chinese angry by resisting. Besides, the missile shield is meant for missiles from rogue nations such as North Korea or Iraq, not China, which is what we want China to understand.

The logic of that assertion is bizarre as well: We intend to build a missile defense system against nations who lack threatening missiles, rather than against a potentially hostile power that actually has missiles and plans to build more.

Bush's friendliness toward China raises a different question. China has become a favorite of America's business community because of the efficient and oppressive rule of the Beijing government. It creates a climate where business can get done.

Increasingly, China's government is being compared to that of General Pinochet in Chile, which is to say a quasi-fascist military regime joined at the hip with business interests that benefit by the murders and oppression enacted by the military to nurture a profitable business climate.

China is a major power, and there is no reason the United States needs to revert to the attitude of the 1950s when China was anathema and all ties were severed. But neither should the United States be sending love letters to the autocratic rulers of China.

The United States cannot stop China from developing its missile program. But it ought to be U.S. policy to use all its diplomatic and economic power to discourage a nuclear arms race that would also involve India, Pakistan, and perhaps Taiwan.

Realpolitik in American foreign policy of the Kissinger era gave us the shah of Iran and Pinochet in Chile—both of them disasters. Bush's obsession with missile defense has worked a screw loose in the thinking of his foreign policy specialists. It doesn't make sense.

Senator LEAHY. I would also like to mention, Mr. Secretary, that Senator Hagel and I met with General Shinseki and Commandant Jones to discuss the administration's policy on land mines. I know there's a policy review underway. I sent copies of correspondence that I have had with the President and with Secretary Powell, and Condoleezza Rice to you, Mr. Secretary, and I will make sure we give your staff copies, again, of those letters.

I think that we have got to look at where our opportunities are. The Pentagon is preparing to spend hundreds of millions of dollars on an alternative program of land mines. When you look at the design, many within the Pentagon will state very frankly it is not going to go anywhere.

There are some existing smart weapons and sensor technology that could offer a more cost-effective solution to the problem, but also could put us back into a leadership role, a worldwide leadership role on this whole issue of land mines, and that the rest of the world—it says is suggesting we are not being positive, acknowledge not only a positive role but also start to acknowledge what we have done, everything from land mine clearing to things like the war victims fund.

So there is a lot of things in here, Mr. Chairman. I am not going to belabor it further, but those are the areas of questions that I will have.

Thank you very much.

Senator INOUYE. Senator Shelby.

STATEMENT OF SENATOR RICHARD C. SHELBY

Senator SHELBY. Thank you, Mr. Chairman.

Mr. Chairman, I, too, want to join in the chorus and welcome Secretary Rumsfeld back here, he is no stranger, and I do not want to take all morning because I want to hear from him, and also have an opportunity, Mr. Chairman, to ask him a few questions.

General Shelton, everybody has been saying you served this country well. We are proud of your record. You have earned it. You might be back here and you might not, but wherever you are, we wish you the best.

Mr. Secretary, there are a couple of things that I will get into later. One has to deal with the chemical demilitarization program that I am very concerned about, because it affects not just my State

and Anniston Army Depot, but some other States, and we had a hearing on this here in this committee back in the spring, and I have written to you about this, and I will get into it later, and the other is, as we talk about the budgets and the weapons, future weapons, I would be interested in your comments and also General Shelton on the future modernization of the services, and what role the rotor craft, the helicopter will play in this transformation effort, and why will they play it? What role do you see helicopters playing on the battlefield of the future, in light of the talk about the increasing likelihood of urban operational environments and a push for greater emphasis on joint operations. I will get into that a little later.

Mr. Chairman, I would ask that my complete statement be made a part of the record.

Senator INOUYE. Without objection, so ordered.

[The statement follows:]

PREPARED STATEMENT OF SENATOR RICHARD C. SHELBY

I would like to join Chairman Inouye and my other colleagues in welcoming both of you here today to discuss the fiscal year 2002 defense budget and the posture of our military forces—Secretary Rumsfeld for the first time and General Shelton for the last time. I would like to take a moment to join the chorus of members who have expressed their appreciation to you General Shelton for your service to our country. I have enjoyed working with you and wish you the best in all your future endeavors.

We are here to discuss the fiscal year 2002 defense request of $328.9 billion sent to us by President Bush for the Department of Defense. Comments on the way you conducted your "strategic review" for President Bush and the adequacy of the fiscal year 2002 request have been very freely offered. I would have loved to have seen a higher number for defense. I believe many more critical requirements exist than can be met with this budget or those proposed in the future years. Mr. Secretary, being experienced and having done this before, you possess a keen understanding of the political realities that exist in Washington right now with a divided Congress. While unsatisfied, I agree that the fiscal year 2002 budget request represents a reasonable and feasible approach to providing for the near-term and most immediate needs of our military services. Given recent news about budget surplus projections, much remains to be done if we hope to put the Department on a glidepath that will result in your being able to meet out-year R&D, Personnel, Procurement, Modernization and overall Transformation goals.

The budget is very tight. Many competing interests and issues of varying priority are fighting for scarce dollars. I want to be very clear how I feel about the work we are here to do on this subcommittee. I believe that providing for the National Defense is our number one responsibility as a Congress. The defense budget blueprint we have been presented with is a good first step. I continue to be troubled by what I've seen both on a regional scale and by activities of a number of foreign countries in terms of the threats we face. I am also concerned with the state of health of many of our critical military bases. If you have been to even the best of our military bases recently, you know exactly what the real needs are facing our military commanders and the soldiers, sailors, airmen and Marines they lead.

I look to President Bush and you, Secretary Rumsfeld, to show the kind of leadership we need to meet the challenges we face. I, along with many others, eagerly await the completion of the 2001 Quadrennial Defense Review. With its completion, answers to the big questions surrounding how to modernize and transform our military forces should become clearer. I want to work with you to take this first step this year and am very interested to see how big a step will be prescribed for fiscal year 2003. Just as we must act to keep our men and women in uniform ready and equipped to meet and defeat any threat in any theater of operations, I believe this fiscal year 2002 budget represents the perfect vehicle to resolve as a Congress, as a government and as a nation to make the defense of our country and our allies a national priority by fielding theater and national missile defenses as soon as possible.

Thank you Mr. Chairman. I look forward to your testimony, and I have some questions to ask when my time comes.

Senator INOUYE. Senator Hollings.

STATEMENT OF SENATOR ERNEST F. HOLLINGS

Senator HOLLINGS. Thank you, Mr. Chairman. Let me commend General Shelton on the outstanding job you have done for the country, General.

Secretary Rumsfeld, we are back at the old BMD, ballistic missile defense. When you were the Secretary under President Ford and they had General Danny Graham in charge of it down at Huntsville, Alabama, so they call come and talk about a new initiative. The fact of the matter is, there are not as many Americans as there are Russians, or as there are Chinese. We cannot match them man for man, but we maintain the security of our country with the superiority and technology, and I am glad you understand this, while we have got world peace generally.

Otherwise, I am worried about Colombia. They have yet to learn the lesson that in a country there has got to be one military force, and that has got to be in the hands of the Government.

David Ben Gurion admonished Menachim Begin of just that, in the early days when Israel had been recognized by the United Nations. Begin was ready to receive a ship off-shore full of arms and run his own military, and David Ben Gurion said, "In a country, there has got to be but one military force, and that is going to be in the hands of the Government."

The Colombians never have really agreed to that in their minds. They are trying to make peace. They are trying cooling-off periods, they are trying to give demilitarization zones, and unless and until they agree on their own to clean the drugs and militants out, I am opposed to anymore military assistance. I have been there, and it is just like another Vietnam, and we are headed right down that road.

Otherwise, I thank you, Mr. Chairman.

Senator INOUYE. I thank you very much. Senator Domenici.

STATEMENT OF SENATOR PETE V. DOMENICI

Senator DOMENICI. Mr. Chairman, fellow Senators, I appreciate an opportunity just to make a couple of statements about your numbers—and I understand you are supporting the White House, the President's request—and whether the numbers will fit in this budget. I believe they do.

I believe a point of order should not take precedence over your request, because according to the numbers, the Congressional Budget Office had assumed an increase in its baseline of $7 billion. And, then what you have left over gives you enough to cover the outlays that are attributable to the increased funding. It is outlays that impact the surplus, be it social security's assumed surplus, or Medicare, so I believe for this year you can get by with, 18, and we can have a nice debate about whether it fits.

On the other hand, I believe there is a far more important issue, and I think that is the issue of the American economy. As a matter of fact, we are now talking about using the surpluses of this great American economy for one thing. Everybody is talking about debt service. As a matter of fact, we have reduced debt in the past 2 years more than any country in civilized history, and we are on

that path again. As a matter of fact, with the pessimism that is being expressed by the budget chairman on the Democratic side, we will pay down the debt and accumulate a surplus of $165 billion.

All of that is now earmarked for debt service, but what happens to education during a slump in the American economy? Do we say we cannot fund it because we want to put all of our money on the debt service? What do we say when defense comes forward with a proposal? The economy is gobbling up our surpluses. It is gobbling it up fast. How fast? $46 billion in outlays for next year will be gobbled up not by this budget, not by an increase in the Department of Education, all because the American economy is in the fifteenth month of a recession, not a technical recession, but from 5.1 percent growth, down to less than 1 percent now, on a gradual 15-month path.

Incidentally, Mr. Chairman, I listened to your remarks about worrying about social security and the Medicare surplus. Let me just suggest to you that the truth of the matter is that yesterday we had a witness before us from the Congressional Budget Office. I said to him, Mr. Crippen, did the President of the United States have anything to do with the current recession in the United States economy? Answer, a simple no. Did the Congress of the United States do anything that brought on this recession? Answer, no.

What has happened is that a readjustment in the world and in America on the capital side of the equation. As a result, we have $46 billion of the surplus we counted on gobbled up by one thing, the American economy being in recession. Everything we do ought to be, how do we get the American economy to come back?

I do not believe you cut spending. I do not believe you cut spending when you have this kind of a recession. As a matter of fact, I might join with those who say you should increase spending; that may be my personal view, but in this case I believe that it is pure folly to talk about the United States is doing something to social security or Medicare, when we are, as a matter of fact, paying down the debt, which is all you do with the social security surplus. That is all you do with it, is pay down the debt.

We are paying now the second largest amount in American history. Which was the largest? Last year.

So I submit there is room for this budget. There is room for what we think, in both Houses, should do the job. Is it the entire budget that they have asked for? I do not know. I have some serious questions about why they have ignored some of the nuclear weapons needs as they produce this budget, but frankly, I intend to support you on either count. If you want to waive what I consider to be a fictional impact on social security or Medicare, a fictional impact, if you want to waive that, I will be with you. I will do whatever you say. I will do as much as you think you need.

If, as a matter of fact, you are worried about the 2002 budget, you can fit it in. You can fit it with the outlays. When will the American economy turns back up and starts yielding the revenues that we need to pay for education increases, to pay for military increases, and all of the other things that we need.

So Mr. Chairman, I think it is relevant that we find out what is needed in this budget, but I do not believe we ought to be ter-

ribly frightened about the fact that we are $3 billion or $4 billion, or $5 billion over, as I indicated a while ago, some fictional line, when as a matter of fact the on-budget surplus is huge, huge at this point.

I thank you.

Senator INOUYE. Thank you very much. Senator Kohl.

STATEMENT OF SENATOR HERB KOHL

Senator KOHL. Thank you, Mr. Chairman, and Secretary Rumsfeld, we all welcome you here today. I just briefly make the point to you that I believe the American people need to hear from you why, at a time when we are basically at peace with the world, and cannot make the case that there is some extreme urgency about considerably increase defense spending, why you feel that with money being in short supply, as it is, and with all agree with that, no matter where we sit we all understand and recognize that we do not have a great deal of money to spend this year beyond our needs, which exist in virtually every category, and which, I am sure many people would argue, are equally as important as defense—why, in light of all of this, you would like for us to allow the military a significant an increase as what it is you are asking for, whether it is force modernization or the missile shield defense system, or all the other items you have which you believe are well-justified.

Looking at it from the big picture, which of course you are very capable of doing and have always done, we need to hear from you why it is that defense in its largest aspects deserves such a large chunk of our total expenditures, and particularly when it is so much more than it has been in recent years. I think that when we come out from this hearing we need to hear from you what the justification is for that, and I thank you for being here.

Senator INOUYE. Thank you very much. Senator Cochran.

STATEMENT OF SENATOR THAD COCHRAN

Senator COCHRAN. Mr. Chairman, I am very pleased to join you in welcoming the distinguished witnesses we have before the committee today. I am especially glad to have the opportunity to welcome General Shelton in his final appearance here, and commend him for his 38 years of dedicated service to our country.

I am pleased the budget request attempts to address some of the concerns this subcommittee has raised in the past, including restoring military morale and improving readiness, as well as a robust development and deployment program for missile defense systems, but I am troubled that in some areas we are still falling short of the mark, particularly in ship construction.

I realize the quadrennial defense review (QDR) will not be completed until the end of the month, and discussions of force structure requirements might be premature at this time, but I am deeply concerned about the continued downward trend in shipbuilding, and its potential negative impact on our Navy's and our Nation's ability to maintain a credible forward presence. I am concerned about the harm that the construction rate is having on our shipbuilding industrial base, and its ability to meet future requirements.

Furthermore, I am skeptical of the proposed General Dynamics acquisition of Newport News Shipbuilding. Even though it has the potential to create a short-term savings in the construction of nuclear powered ships and submarines, the resulting monopoly could have a long-term crippling effect on the rest of the industrial shipbuilding base. If this merger is allowed to proceed, I believe we will be paying significantly more per ship in the future.

Additionally, I think a commitment should be made as soon as possible to begin the DD–21 program. It will provide operating efficiencies and stealthy power projection that will enable us to prevail in future conflicts with less risk to our sailors and marines.

Mr. Chairman, I look forward to the testimony of our witnesses.

Senator INOUYE. Thank you very much. Senator Feinstein.

STATEMENT OF SENATOR DIANNE FEINSTEIN

Senator FEINSTEIN. Thanks very much, Mr. Chairman, and welcome, Mr. Secretary. Welcome, General Shelton. It is good to see you both again.

I want to just make a few off-the-cuff comments, if I might, on the missile defense issue. I am greatly concerned about the testing, the cost, and the strategic and arms control implications of proceeding with the plan you want to proceed with involving missile defense. The bottom line of a program it seems to me, is: is the world going to be safer because the United States has an overarching ballistic missile defense system, or is the world going to be a more dangerous place?

When I read that the administration may well support additional nuclear testing, allow China additional nuclear tests, would not object to China's moving ahead with the development of a missile program, I see where the world may be a much more dangerous place.

I would also suspect that the $60 billion put forward as the cost is just the first down-payment on what is likely to cost literally hundreds of billions of dollars, and when I talk to men in uniform, yes, even the heads of services, as I did last night, they do not believe this is a number one threat. They are much more concerned about the asymmetrical threat, and one I spoke with was even more concerned about the concept of homeland defense, because they believe that the asymmetrical threat to the United States is much more dangerous and should be a much higher priority.

As a member of the Intelligence Committee, chairman of the Terrorism Subcommittee of the Judiciary Committee, Senator Kyl and I have held three hearings on the commission reports with respect to terrorism. Intelligence has been looking at how we manage our counterterrorism effort. We have asked the administration, Senator Kyl and I, in writing, for advice as to a program. We have not yet had a response, and yet to me this is a much more significant threat to the United States of America than the very remote possibility that Kim Jong II is going to commit suicide by putting a TAEPODONG III in the air. And yet we are faced with a budget that begins to put some deployment mechanisms into an untested ballistic missile defense, and I must tell you I have a major concern about it, so I think—and I will be asking some precise questions about that.

What is circulating on the Hill, and let me be very precise, is that this administration is going to use China to essentially justify a missile defense program. I very much hope that is not the case. I do not believe—and I am a China watcher too. I studied Chinese history in college, have tried to read everything that has been written, have been to China literally dozens of times, have had discussions with the leadership.

I do not believe that China wants to be our enemy. We could make China an enemy. I do not doubt that. But I have very deep concerns about the wisdom of violating, or abrogating, or pulling ourselves out of the Anti-Ballistic Missile (ABM) Treaty, and I would like to know whether that is really the intent that is behind this program as well, so that is where my questions will be.

Thank you, Mr. Chairman.

Senator INOUYE. Thank you. Senator Bond.

STATEMENT OF SENATOR CHRISTOPHER S. BOND

Senator BOND. Thank you very much, Mr. Chairman, and I very much appreciate the opportunity to join with you in welcoming our old friend and new Secretary of Defense again. Secretary Rumsfeld, we appreciate having you here.

I join with my colleagues in saying a sincere thanks to General Shelton. We have certainly appreciated the great work that he has done, and service to the United States, as well as his work with this committee.

Mr. Chairman, as a member—and I would say that let me add, I concur with Senator Domenici. As one of his team on the Budget Committee, I believe he has stated it well, and I will join with him in supporting the budget, as he outlined.

But as a member of this committee, and as cochair with Senator Leahy of the Senate Guard Caucus, I believe that our defense policy and the role of the Guard and Reserve in supporting our national military strategy is of the utmost importance. It is important to me, it is important to the people I serve in Missouri, and I think it is important to this Nation, and frankly, I have been very disappointed that we in Congress have not been consulted on many of the issues that concern our Armed Forces, and that the Guard and Reserve in particular have not been more fully engaged in the process of evaluating our national military strategy. These issues have significant implication to our national security in our Nation.

Mr. Secretary, we are your strongest allies. We want to be your allies, but in order to help, as the chairman so aptly stated, we needed to be included in the discussions. Communication and coordination would suffice. After all, we are all working in the same direction.

As you look for necessary savings within the Department of Defense, it is clear to me that we will fail to maximize potential savings if you fail fully to leverage the myriad numbers of capabilities residing within the Guard and Reserve. We have seen an increased use of Guard and Reserve capabilities in past regimes, and they have enabled us to do a lot more with less. However, we have yet to see a clear signal from this Department of Defense, and you and your team, that this philosophy will continue, and that this reli-

ance will continue to be there, and I am nervous. I hope you can assuage our concern.

Having commanded the Guard in Missouri, as Commander-in-Chief for 8 years, and having worked with them in the Reserve over the years, I know they bring tremendous capabilities, often at a great cost-savings, savings above what you can get from full-time forces. We need to address and assess adequately the depth and the breadth of these capabilities as we develop our military strategy and shape our military forces.

Furthermore, I think it is critical that we acknowledge the value of our citizen soldiers, sailors, airmen, and marines in sustaining America's own involvement in support for a strong defense. Our Guard and Reserve forces forge a link, a bridge between our active forces and our citizens, and I saw that, Mr. Secretary, in the aftermath and during Desert Storm. The people of America were aware of and they were mobilized, and they were vested in our efforts because units were called up from their home towns, and I joined in greeting them when they came back as conquering heroes and heroines as they should have been welcomed back.

This involvement, this citizen participation in our Nation's military commitment is something that has a value much higher than any dollar amount we can put on it, and I just call your attention, and I hope we can see the Guard and Reserve fully involved in the military strategy, both for the sake of our defense, and for the sake of saving dollars.

Thank you, Mr. Chairman.

Senator INOUYE. Thank you very much. Senator Specter.

STATEMENT OF SENATOR ARLEN SPECTER

Senator SPECTER. Thank you very much, Mr. Chairman. I thank you, Secretary Rumsfeld, for returning to the Department of Defense and undertaking the prodigious job, and the way you are tackling it, and I thank you, General Shelton, for your great service to the country.

My questions will focus, among the many, many issues which this subcommittee is looking at, on the issue of missile defense and the ABM Treaty. I personally support missile defense, but I want to see the particulars as to how much it is going to cost, what the realistic possibilities are and the plans on deployment.

Back in the mid-eighties when I was part of the Senate observer team in Geneva, we had long debates about the narrow versus broad interpretation of the ABM Treaty. I participated in the floor debate which was characterized by some as historic at that time, and I am very much concerned as to what is going to happen with the ABM Treaty. I am hopeful that we will be able to work it out with Russian President Putin and the Russians, because it is such a major matter.

During the August recess, I had occasion to travel to China, where our missile defense and the ABM Treaty was very much on the minds of the Chinese leaders. The same concerns were expressed in South Korea, where the South Korean president was hopeful that we would take a little different tone toward North Korea. He hopes we will not depict North Korea as a major threat,

even though they may be, and instead, try to work something out on diffusing that problem.

I think it is very important that there be an unequivocal statement from the administration denying, which I think is the fact, a policy of permitting, or not objecting to, a Chinese buildup on nuclear defense in exchange for not opposing our missile defense. China is the coming Colossus, 1 billion 250 million people, and if they have a nuclear build up, that will encourage India as an offset, which will encourage Pakistan as an offset, and cause all sorts of problems.

Finally, Mr. Secretary, I will be interested in your views concerning abrogation of the ABM Treaty, if it comes to that, the role of the Congress. There has been a historical policy of congressional resolution on abandoning treaties. Constitutionally, there has to be a two-thirds ratification by the Senate. However, that policy was changed by President Carter by the Taiwan treaty of 1978. That change led to a curious lawsuit which was brought to the Supreme Court, with Senators Goldwater, Helms, Thurmond and Hatch all arguing that the executive could not unilaterally terminate a treaty. We are far from that situation, but it is something which I think is worth exploring at an early stage.

Thank you for being here, and thank you, Mr. Chairman.

Senator INOUYE. Thank you very much. Senator Hutchison.

STATEMENT OF SENATOR KAY BAILEY HUTCHISON

Senator HUTCHISON. Thank you, Mr. Chairman, and I want to thank you for taking your time to come here, and I think this is a very important time for us. First, I want to thank you, Mr. Secretary, for taking on the mammoth task of saying that the security threats of the 21st Century are different from those we have faced in the last century, and I applaud you for being very bold, because I do not think the United States has established what those security threats are in the past, and I do not think that we have even established our rightful place in the world in the post cold war era, so I applaud that, and I know you are going to be very deliberate and I want to say that of the things that I have seen in the paper, I am very open to a change in our strategy of two major regional conflicts, but I hope you will have intense briefings for us if that is what you are going to recommend, and tell us why you think the threats should be different.

Secondly, I have talked to you about this, and I hope that part of your overall strategy for building our force will include assessing our overseas deployments and making sure that we are in full force where we need to be, but where we also pull back from perhaps the numbers that we have had. Just because we have been there for 20 or 30 or 40 or 50 years does not mean that in this new assessment it will be the same.

Third, I just want to say that I appreciate what the President and your support of the President are doing for missile defense, that you are being very deliberate, but I cannot imagine the United States of America seeing the potential threats and not addressing those threats, and it is not as if we could all of a sudden 10 years from now say, oh my goodness, there is a rogue nation that has an intercontinental ballistic missile, and immediately have a missile

defense system for that. We have to plan ahead. That is our responsibility. That is our duty, and it is yours, and you are taking it, and I appreciate it.

So I am going to be very supportive of your missile defense needs, your assessments, and it would be unthinkable to me that we would not do the necessary things to prepare for the long term for a missile defense, not only theater, which protects our troops in the field wherever they may be in the world, but intercontinental, to protect our people who live in our country.

So I thank you for your boldness. I look forward to a lot more discussion and briefings from you, and I think once we have all the facts and your assessments, then you will find the support that you need in Congress to prepare us for the 21st Century and the security of our people.

Thank you.

Senator INOUYE. Thank you very much. I have a statement from Senator Reid that I would like to put in the record.

[The statement follows:]

PREPARED STATEMENT OF SENATOR HARRY REID

Mr. Chairman, let me begin by saying how pleased and honored I am to serve on this prestigious committee entrusted with appropriations to meet the nation's defense needs. Clearly, the beginning of the 21st century is a time of profound change for our military. We must provide for the immediate personnel, readiness and modernization needs of our armed forces, with a clear emphasis on quality-of-life issues for our servicemen and their families. At the same time, we must transform our military to meet new threats and take advantage of enabling technologies to ensure that America's fighting forces are second to none, now and in the decades ahead. This balance between short- and long-term needs is a difficult one, and I look forward to hearing Secretary Rumsfeld's thoughts on setting priorities in a challenging budget environment.

Perhaps no other state in the Union played a more significant role than Nevada in winning the Cold War. The Nevada Test Site is a high-technology engineering marvel where the United States developed, tested, and perfected a nuclear deterrent which remains the cornerstone of America's security and leadership among nations.

In this post Cold-War era, Nevada's military bases and industry are poised to make a continued contribution to ensure America's armed forces will prevail in any armed conflict. For example, Nevada's Nellis Air Force Base is slated to play an increasingly important role in testing and evaluating new and upgraded Air Force weapons systems. Nellis Air Force Base has a solid infrastructure, cutting edge technology, some of the most talented personnel in the U.S. armed forces, and is one of the only air bases where planes have the ability to take off with live ordinance. This March, Nellis will also become the premier training base for pilots of the F–22 Raptor, a plane that provides an asymmetric fighting advantage to protect U.S. interests the world over for the next 20 years.

The Naval Air Station at Fallon is the Navy's premiere tactical air warfare training facility. The associated Fallon Range Training Complex is a national treasure that offers our military services the very finest conditions in which to conduct critical training exercises. Put simply, the facilities at Fallon define the airborne battle tactics that lead to victory in battle. Fallon's future is bright among Naval shore activities. A new hangar, ramp and academic building were built in 1995 to accommodate the move of the Navy Fighter Weapons School, popularly referred to as TOPGUN.

The Hawthorne Army Depot has been at the forefront of Army logistics for the past 70 years, serving as the government's premier resource, recovery, and recycling facility for munitions numbering in the tens of thousands and ranging from small arms and fuses to rocket propellants and tactical missiles. To demonstrate its leadership at the forefront of military logistics, Hawthorne is seeking alternatives to the open burning and detonation of munitions. Open burning and detonation generates pollutants, raising serious concerns about adverse health effects on populations sited down range from these facilities. This year's defense appropriation will hopefully include funding for the development of a rotary furnace technology at the Hawthorne Army Depot to dispose of munitions in an environmentally friendly manner.

In closing, I want to pledge my support to the Secretary of Defense and General Shelton, and to the men and women of America's armed forces. Finding the right balance between present needs and future musts is indeed a challenging task, but we will find that balance point. As a new member of this committee, I'm committed to proving the necessary funding for the defense of this great nation and its people.

Senator INOUYE. Mr. Secretary, now that you have heard the accolades of this committee and the concerns, I am pleased to have you here, sir.

Secretary RUMSFELD. Thank you very much, Mr. Chairman, Senator Stevens, members of the committee. I have with me also Dr. Dov Zakheim, the Comptroller of the Department of Defense. I would like to submit my prepared testimony for the record——

Senator INOUYE. Without objection.

Secretary RUMSFELD (continuing). And then make some summary comments.

TRIBUTE TO GENERAL SHELTON

First I want to join with you, Mr. Chairman, and the members of the committee, in commenting on General Hugh Shelton's service as Chairman of the Joint Chiefs of Staff. It has been remarkable. He is a courageous and talented individual. Two tours in Vietnam, a Purple Heart, leadership of infantry and special forces units all over the world, leading the 101st Airborne Division into battle in Iraq, commanding the Joint Task Force in Haiti, leading U.S. Special Operations Command, and then serving as our Nation's highest ranking military man.

General Shelton is, indeed, a model soldier, and an outstanding leader of men. It has been my privilege to serve with him these past months. I must say that I have benefitted from his wise counsel as we have worked together to fashion a new defense strategy that we hope will help guide our forces into the 21st Century.

General Shelton, America is grateful to you for your dedication and your service, and I feel fortunate to work with you.

General SHELTON. Thank you very much, Mr. Secretary.

Secretary RUMSFELD. I would very much have liked to comment on the very thoughtful comments and questions that were posed as we began the meeting today. There are two I think I should respond to immediately before making my remarks, just in case someone leaves the room with the wrong impression.

NUCLEAR TESTING

Senator Feinstein, I believe you said something to the effect that you have heard that the United States is talking about nuclear testing, and I do not know quite what you said, but if you said that, it would be not correct. The President has indicated that he supports the moratorium. There have been no utterances by anyone that I know of in the administration about the subject of nuclear testing, and I would not want someone to leave the room with the impression that that is under debate or consideration, because to my knowledge it is not.

NO CHANGE IN CHINA POLICY

Second, with respect to the People's Republic of China, and the things that are in the press on that subject, I had the benefit of

being out in Senator Domenici's home State for a little vacation over the week and returned back to find the press filled with stories about this.

I have checked with Secretary Powell and I have checked with Dr. Rice, and the suggestion that the United States has or is poised to approve of China's military and nuclear buildup for some reason in exchange for something is simply not the case, notwithstanding what people are reading in the press, and I think, Senator Specter, you asked the question, and I know Senator Feinstein, you asked the question, and all I can say is, I have talked to the two people in foreign policy who work very closely with the President on those issues, and that is not the case.

OVERVIEW OF FISCAL YEAR 2002 BUDGET REQUEST

Mr. Chairman, when President Bush took office 7 months ago, he made clear that one of his highest priorities would be to address and arrest the decline in our Armed Forces and begin working to build the 21st Century military that can help deter aggression and extend peace and prosperity. To begin reversing the effects of close to a decade of overuse and underfunding, the President first submitted the 2001 supplemental budget request which was approved by Congress earlier this year, and we thank you for that, and a 2002 budget request followed. It includes the largest increase in defense spending since the mid-1980's.

This is an important step in getting the Department out of a hole that a long period of underfunding has put us in, and it is a significant investment of taxpayer's money, as the members of the committee have pointed out.

The 2002 budget includes funding for military quality of life, increases in miliary pay, housing, and health care, for training, for readiness, for maintenance and repair of aging equipment, for modernization and transformation in the research and development (R&D) area, and Mr. Chairman, we need every nickel of it.

The budget request does not solve the problems of the Department. It begins to repair the damage that has been done by a long period of underfunding and overuse. In addition, it lays the foundation for the effort to transform the Armed Forces for the 21st Century, and as we work to transform the Armed Forces, we are working at the same time to try to improve the way the Department of Defense functions, and to encourage a culture of greater innovation, to turn waste into weapons, to show respect for the taxpayer's dollars, and to speed the utilization of new technologies to help keep the peace into the decades ahead.

BUDGET PRIORITIES

As you consider the 2002 budget, let me briefly share some of our priorities with you and how they relate to the request that is before you. As we prepare for the new challenges that have been mentioned in some of the opening comments, certainly U.S. homeland defense takes on an increasing importance, and I quite agree with Senator Feinstein's comment that the so-called asymmetrical threats are the more likely threats in the period ahead, and they run across the spectrum, from terrorism, cruise missiles, to ballistic

missiles, to cyber attacks, and certainly the Department needs to address all of those issues.

The proliferation of weapons with increasing range and power in the hands of multiple potential adversaries means that the coming years will see an expansion of the risks to U.S. population centers, as well as our allies and friends. We will face new threats, as has been pointed out.

Today, we are vulnerable to missile attack. That is a fact, and as has been suggested by the chairman, weakness is provocative. It invites people into doing things that they otherwise would avoid.

If a rogue State, and you can pick any one you might like, has that capability and demonstrates that capability, there is no question but that a terror weapon has the effect of terrorizing and altering behavior, regardless of whether or not it is used, and simply its existence forces people to change their behavior.

Think, in trying to forge an international coalition and stop an act of aggression, by—for example, when Iraq went into Kuwait, if we had known beforehand that Iraq had a nuclear capability and a ballistic missile capable of reaching Europe and the United States, it would have been difficult, if not impossible to fashion such a coalition.

The alternatives a country is faced with, absent the ability to defend, are several. One is to acquiesce, and allow a country to take over their neighbor. A second is to preempt, and that is a very difficult decision for a country, and a third is to put your population at risk and then retaliate after you have lost a large number of people, if that happened to be the case.

What is at stake here is not only protecting the American people and our allies from attack, although that is critical. What is also at stake, in my view, is the ability to project force to defend peace and freedom in this world. Winston Churchill once said, I hope I shall never see the day when the forces of right are deprived of the right of force, and that is precisely what rogue States intend, to deny the forces of right the ability to stop aggression and defend freedom in the 21st Century.

The President's request for missile defense is less than 3 percent of the 2002 budget. For so-called national missile defense, that is to say, separating theater missile defense from it, it is something like 1½ percent of the budget. More than 98 percent of the budget is for other priorities, including the other so-called asymmetrical threats.

But let there be no doubt, the threats are real. President Bush is committed to ensuring that we develop the capability to contribute to peace, stability and freedom, and without such capabilities the United States could be driven inward, at great risk to the world economy.

Senator Kohl mentioned the reason why a budget request with an increase in a time of peace makes sense. If you think about it, the world economy is what enables the American people to go about their business and have economic opportunities and provide for their families, that we are a participant in that. If we see an instability injected into the world economy, because of war or conflict or because of the fear of war or conflict, the American people

lose that. We lose that, all the things that we value, and that our fellow citizens value.

We have to remember that what underpins a prosperous economy is peace and stability, and what provides peace and stability at this time in the history of the world is the United States of America's capabilities. We are spending less than 3 percent of the gross national product of the United States on defense.

When I came to Washington in 1957, President Eisenhower was President, and during that period, my early years in Congress, we were spending 10 percent of the gross national product on defense, and we could do it just fine. Today, we are down below 3 percent of the gross national product, and the idea that we cannot afford to spend 3 percent of the gross national product to provide the peace and stability that makes prosperity and economic opportunity across this globe possible I think is not debatable. We can.

As you know, we are working to reach an understanding with Russia by the time our development programs begin to bump up against the constraints of the ABM Treaty. I do not know if we will be able to reach an agreement or not, but certainly everyone is working on it. The President is, Secretary Powell is, I am. I have had meetings, and will have more this month, and that is our hope.

The question as to whether or not they will be successful I would submit partly depends on the perceptions that the Russians have, and to the extent the Russians develop a perception that the United States is not interested in going forward and providing defense against ballistic missiles, or that we are split on that issue, obviously it is in their interests to not come to any agreements with us, and so I would hope that we would go through this period strengthening the President's position in his negotiations with the Russians so that we can move beyond and establish a new framework for the relationship between the United States and Russia, a relationship that is based not on the cold war, and not on mutual assured destruction, but is based on the future and the relationship that makes the most sense between two countries that are, indeed, not enemies.

The 2002 amended budget moves us on a path towards transformation by undertaking urgently needed immediate repairs on our existing force, and by investing now in some of the transformational technologies and R&D that will be needed. Regrettably, we can't build the 21st Century force unless we first begin repairing the damage that has been done by overdrawing the peace dividend in the 1990's. We spent much of the 1990's living off investments of the 1980's, and we allowed our military capabilities to be slowly degraded, as we overused a shrinking and underfunded force.

To their enormous credit, America's dedicated servicemen and women dutifully did more with less, putting off needed investment in training, infrastructure, maintenance, procurement, to keep up with the proliferation of missions. A number in Congress and certainly on this committee have worked hard to give them the resources they need, but notwithstanding those efforts, the reality was that they were overworked and underfunded over a sustained period, and the result has been a serious backlog in maintenance,

deferred procurement, a deteriorating infrastructure, and lost opportunities for transformation.

For example, basic research funding has declined 11 percent since 1992, research, development, test and evaluation (RDT&E) funding levels have declined by 7.4 percent in the same period, the deferred maintenance for DOD facilities, which is the cumulative amount that has not been funded from year to year, currently stands at $11 billion, DOD is failing to meet the current standard to maintain a steady state of 310 ships, as Senator Cochran mentioned. Without added ship construction, it is headed towards an unacceptable steady state of 230 ships, which is obviously unacceptable.

Every year the U.S. Government puts off addressing these problems the cost of catching up grows worse. We need to change it. In addition to the various risks associated with our ability to execute war plans, the Department must also develop the ability to take into account the risk to personnel, the risk to modernization if we fail to transform. We have to develop the skill and the ability to weigh an expenditure today for modernization of a weapon against the risk of being in a conflict 3 years from now and being struck deaf, dumb, and blind because we did not make the proper investments in information technologies and interoperability and antijamming capabilities. That is not easy to do, but that is the process we are going through.

In February, the President proposed a $310.5 billion baseline budget that includes $4.4 billion in new money for military pay, housing, and R&D. The request before you raises that investment to a total of $328.9 billion. That is an increase of $18.4 billion in budget authority. Taken together, this is $22.8 billion in new money for the Department in 2002.

Among other things, the request increases spending for military personnel level of $75 billion in 2001 to $82 billion, an increase of 9 percent, including funds for needed targeted pay raises and improved housing allowance. It requests $4 plus billion to improve the quality of family housing, a 12 percent increase. It requests the congressionally required increased spending on defense health from the 2001 level of $12 billion to $7.9 billion, an enormous 48 percent increase of $5.8 billion.

I was asked, why such a large increase in health? The answer is, the Congress passed legislation providing for a set of health provisions in one case, for example, for the over-65 lifetime health, and the estimates are very difficult to make, but the cost of that program, while difficult to estimate, is clearly enormous, and it is going to have a significant effect on the defense budget over the coming period.

The budget before you begins to reverse the neglect of maintenance and repair requested increased spending on operations and maintenance from a 2001 level of $107 billion to $125 billion, a 16-percent increase. It fully funds the Navy and Air Force op tempo costs. The Army made a decision to be slightly below full funding with respect to tank hours and helicopter hours.

The reality is that we cannot transform the Armed Forces unless we also transform the way we do our business in the Department. The Department used to be a technological leader in innovation.

Today, with few exceptions, the Department can barely keep up with the pace of technological change, much less lead. Since 1975, the Department has doubled the time it takes to produce a weapons system at a time when new generations of technology have shortened the years down to just 18 to 24 months. This virtually guarantees that many of DOD's newest weapons will be one or more technology generations behind the day they are fielded. The combination of internal inefficiencies and external constraints on the Department together ensure that DOD operates in a manner that is too slow, too ponderous, and too inefficient, and that whatever it does ultimately produce tends to be late and not respectful of taxpayers dollars.

The situation really cannot continue, in my view. In the coming weeks, we will be laying out a plan to address the waste and duplication of effort in the Department. We will undertake initiatives to encourage cost savings to foster the culture of intelligent risk-taking and begin applying modern business practices to the way the Department does its business. We will outline specific cost savings that we are undertaking unilaterally, as well as some structural reforms that will help lay the groundwork for further savings in the years ahead.

While there are many things we are doing unilaterally in the Department, we will also need some help from Congress. For example, we will need support for our so-called efficient facilities initiative, requesting congressional authorization for a single round of miliary base closures and realignments in 2003.

Since the end of the cold war, the number of men and women in uniform has come down 40 percent, but there has not been a parallel reduction in facilities. People who have studied the problem conclude that we have from 20 to 25 percent more infrastructure than we need to support the force. That excess infrastructure is costing us unnecessary billions of dollars every year in unneeded rent, utilities, and maintenance. We estimate that after the first few years, this program could save us as much as $3.5 billion annually, money that could be better spent on high priorities like readiness, modernization, and quality of life for the troops.

We also need your support for the proposed revitalization of the B–1 bomber fleet. By reducing the fleet from 93 to 60 aircraft, and concentrating the remaining aircraft in two of the largest B–1 bases, rather than in the five bases where they are currently scattered around today, we can free up funds for the Air Force to rapidly modernize the remaining 60 aircraft with new precision weapons, self-protection systems, and reliability upgrades, so that they can remain viable for use in future conflicts.

There has been a good deal of opposition to this proposal, but it is the right thing to do, and we need to get on with it. By undertaking both unilateral reforms, and reforms in cooperation with Congress, we can bring the Defense Department to a more effective institution.

Mr. Chairman, we need to do it because of the harsh reality that the unmet needs of the U.S. Armed Forces exceed the funds available to address them, so unless, together, we can turn waste into weapons, we will have to come to you next year and the year after that asking you to appropriate still more of the taxpayer's dollars

to meet unmet needs, many of which could have been paid for by trimming and cost savings from within.

Neither the transformation of the Armed Forces nor the transformation of the Department is going to be easy. Change is hard, and if anyone does not believe it, just look at the turmoil that it can cause when one proposes change. A philosopher once wrote that there is nothing more difficult to plan or more dangerous to manage than the creation of a new system, for the initiation has the enmity of all who would profit by the preservation of the old institution, and merely the lukewarm defense of those who would gain from the new.

We really have no choice. We are entering a world where new threats can emerge suddenly. We need to have a military that is sized and structured to meet those challenges. We need a Department that is innovative, flexible, and forward-thinking if we are to meet those new and different threats. The time has come to reinvigorate the morale and readiness of the force and prepare for the new and different challenges in this new and still dangerous and untidy world.

PREPARED STATEMENT

Mr. Chairman, I thank you for the opportunity to be here, and look forward to responding to questions.

[The statement follows:]

PREPARED STATEMENT OF HON. DONALD H. RUMSFELD

Mr. Chairman, members of the Committee, I thank you for this opportunity to meet with you this morning.

When President Bush took office some seven months ago, he made clear that one of his highest priorities would be to arrest the decline of our armed forces and begin building a 21st Century military that can help deter aggression and extend peace and prosperity well into the new century.

To begin reversing the effects of close to a decade of overuse and under-funding, the President submitted first a 2001 supplemental budget request, which was approved by Congress earlier this year, and more recently, a 2002 budget request that includes the largest increase in defense spending since the mid-1980s. This is an important step in getting the Department out of the hole that long period of under-funding has put it in, and a significant investment of the taxpayers' money. But it is a step desperately needed by the men and women in uniform.

The 2002 budget includes critical funding for military quality of life—increases in military pay, housing, and health care. It includes funding for training and readiness, for maintenance and repair of our aging equipment, for modernization and transformational R&D.

Mr. Chairman, we need every nickel of it.

This budget request not only begins to repair the damage done by a long period of under-funding and over use, it lays the foundation for the effort to transform our Armed Forces for the 21st Century.

Earlier this year, the President asked the senior civilian and military leaders of the Department to review the U.S. defense strategy, to propose ways we could reinvigorate the morale of our men and women in uniform, improve readiness to meet current threats, and achieve transformation of the forces to meet the new and different security challenges of the 21st Century.

That effort is nearing completion:

—The Congressionally mandated Quadrennial Defense Review will be finished this month. It has been the subject of extensive and fruitful discussion by the senior DOD civilian and military leadership. The report will be presented to the President and the Congress in the coming weeks.

—The annual Defense Planning Guidance (DPG) was issued last week. It will help guide the Department as work goes forward to prepare the President's 2003 budget.

—A new National Defense Strategy has been developed and discussed with the President, along with a new approach to planning for and sizing forces. This new approach focuses less on specific regional conflicts, and more on building a portfolio of U.S. military capabilities to meet the wide range of contingencies we are likely to face in the future. Because we cannot anticipate who might threaten us in the future, but can predict with some confidence the means an adversary is likely to employ, we will likely be shifting from a "threat-based" to a "capabilities-based" approach to long-term planning.

—The new force-sizing construct we have developed and discussed with the President will replace the two Major Theater War construct that has guided us since the end of the Cold War. The new construct would prepare forces to defend the U.S., deter in four critical regions, prevail in two overlapping conflicts, while leaving the President the option to commit forces in either of those conflicts to impose our will on the adversary—including regime change and occupation.

—The Congressionally-mandated Nuclear Posture Review is well along, and will be issued this fall. It will recommend a path to fulfill President Bush's pledge to achieve a strong, credible deterrent with the lowest number of nuclear weapons consistent with U.S. national security needs and U.S. alliance commitments.

—We have re-focused and revitalized the missile defense program, shifting from a single-site "national" missile defense approach, to a broad-based research, development and testing approach that will explore many previously untested technologies and approaches, and lead to the development and deployment of defenses able to intercept missiles of various ranges in various stages of flight. This will include the capability to defend not only the American people, but our friends, allies and deployed forces as well, from limited threats.

—At the same time, we are working with Russia to develop a new strategic framework for the 21st Century—one that will put behind us the hostilities and institutions of the Cold War, including the nuclear balance of terror and the ABM Treaty that helped enshrine that balance of terror as the foundation of our relationship.

—And, as we work to transform the Armed Forces for the 21st Century, we are working at the same time to transform the Defense Department—to encourage a culture of greater innovation, to turn waste into weapons, to show respect for the taxpayer's dollars, and to speed the utilization of new technologies to help keep the peace into the decades ahead.

Mr. Chairman, these efforts will help us transform our Armed Forces for the 21st Century. But let me be clear: we cannot wait until the 2003 budget cycle to get started—the needs are too great and too urgent to delay.

We need your support for the President's 2002 budget. We need your support for critical funds to repair aging planes, tanks and ships, to fix collapsing roofs and fund training and readiness for our troops.

The budget before you lays the foundation for the transformation of U.S. Armed Forces, while at the same time providing immediate and much needed funding for critical priorities contained in the new defense strategy—including funds to address risks to people, modernization and transformation that have been neglected.

So as you consider the 2002 budget, allow me to briefly share some of those priorities with you, and how they relate to the 2002 budget request before you.

As we prepare for the security challenges of the 21st Century, U.S. homeland defense takes on increasing importance. For most of U.S. history, we have been blessed with the security advantage of excellent geography, friendly neighbors and a vast ocean buffer. But the Cold war, with its threat of missile and bomber strikes against our territory, ended our geographic advantage. The end of the Cold War has not restored it.

To the contrary, the proliferation of weapons with increasing range and power into the hands of multiple potential adversaries means that the coming years will see an expansion of the risks to U.S. population centers—as well as those our allies. We will face new threats—from satchel bombs, cruise missiles, and ballistic missiles of varying ranges.

This is a major change in our circumstance. We can no longer count on future conflicts remaining largely contained within their region of origin far from our shores. States unfriendly to the U.S. are working aggressively to develop nuclear, chemical and biological weapons of mass destruction and a variety of means to deliver them. They are doing so because they want to have the ability to blackmail us by having the capability to strike our people where they live and work—as well as U.S. friends, allies and deployed forces around the world.

If we remain vulnerable to missile attack, a rogue state that demonstrates the capacity to strike the U.S. or its allies could have the power to hold our people hostage

to nuclear or other blackmail. Forging an international coalition to stop an act of aggression by such a state would be difficult if not impossible. Without missile defense, the alternatives would be to do nothing and thereby let aggression stand, to repel the aggression (and thereby put our populations at risk), or to attempt to preempt, a difficult decision for any country.

What is at stake here is not just protecting the American people and our allies from attack—although that is critical; what is at stake is the U.S. ability to project force to defend peace and freedom in this new century.

Winston Churchill once said: "I hope that I shall never see the day when the forces of right are deprived of the right of force." That is precisely what rogue states intend—to deny the forces of right the ability to stop aggression and defend freedom in the 21st Century.

If we are to remain engaged in the world, the capability to defend the United States from a range of new asymmetric threats must be a high priority.

This is why the President has requested $8.3 billion for all types of ballistic missile defense. We need Congress to fully fund the President's budget request—a budget that also contains critical funds to deal with terrorism, force protection, cruise missile and protection of our space assets. The safety of our people, our friends, allies, and deployed forces—and our ability contribute to the peace and stability that underpin world prosperity—depend on your approval of these funds.

The President's request for missile defense is less than 3 percent of the 2002 amended budget. More than 97 percent of the defense budget goes to other critical priorities. It is a modest, but prudent, investment—especially when compared to the significant investments that rogue states like Iran, Iraq, Libya and North Korea are making.

Let there be no doubt: The threats are real. President Bush is committed to ensuring we develop the capability to contribute to peace, stability, and freedom. Without such capabilities, the U.S. could be driven inward at the great risk to the world economy; for without peace and stability, the world economy is threatened.

As you know, we are working to reach an understanding with Russia by the time our development programs bump up against the numerous constraints of the ABM Treaty.

Mr. Chairman, I recently returned from Moscow, where I met with my Russian counterpart and others discussing these matters. I believe that we may be able to reach an understanding with Russia—but let there be no doubt, doing so will be difficult and success is by no means assured.

Our discussions with Russia will continue in the months ahead. Secretary Powell will meet with his counterpart next month in Washington. I will meet with my counterpart later this month in Italy. And President Bush will be meeting with President Putin in China in October and in Crawford, Texas, in November.

Congress can help determine the success or failure of these discussions. If Congress shows the same resolve as the President to proceed seriously with research, development, testing and deployment of missile defense, it will significantly improve the prospects to achieve a cooperative outcome with Russia.

If Congress does not approve the President's request for missile defense—if funding is cut or restrictions attached—Russia could get the mistaken impression that by dragging its feet it will be able to prevent development of U.S. missile defenses. This would harm our chances of achieving a cooperative solution.

We may or may not succeed in these discussions with Russia. But let us not fail because we send them signals of disunity or lack of resolve.

Mr. Chairman, The 2002 amended budget starts us on a path toward transformation by undertaking urgently needed, immediate repairs to our existing force, and by investing now in some of the transformational technologies and R&D that we will need for the 21st Century force. We cannot build that 21st Century force unless we first begin repairing the damage that was done by overdrawing the peace dividend of the 1990s.

We spent much of the 1990s living off the investments of the 1980s. We allowed our military capabilities to be slowly degraded as we overused a shrinking and under-funded force. To their enormous credit, America's dedicated servicemen and women dutifully did more with less—putting off needed investment in training, infrastructure, maintenance, and procurement to keep up with a proliferation of missions. A number in Congress—and on this Committee—worked hard to give them more resources. But notwithstanding those efforts, an imprudent policy of overworking and under-funding our troops continued.

The result has been a critical backlog in maintenance, deferred procurement, a deteriorating infrastructure and lost opportunities for transformation.

For example, basic research funding has declined by 11 percent since 1992, and RDT&E funding levels have declined 7.4 percent in the same period. The deferred

maintenance for DOD facilities—the cumulative amount that has not been funded from year to year—currently stands at some $11 billion. DOD is failing to meet the current standard to maintain a steady state of 310 ships, and, without added ship construction, is headed towards a clearly unacceptable steady-state of 230 ships. Every year the U.S. government puts off addressing these problems, the costs of "catching up" grow worse.

We need to change this. In addition to the various risks associated with our ability to execute war plans, the Department must also take into account the risks to personnel, to modernization and to transformation when determining how we allocate resources. And we need the cooperation of Congress in this effort.

The President's 2002 budget proposes immediate investments to address the neglect of these critical areas and to begin stabilizing the force.

In February, the President proposed a $310.5 billion baseline budget that included $4.4 billion in new money for military pay, housing, and R&D. The request before you raises that proposed investment further to a total of $328.9—an increase of an additional $18.4 billion. Taken together, President Bush has proposed $22.8 billion in new money for the Department of Defense in 2002.

Among other things, the President's budget:

—Requests increased spending on military personnel from the fiscal year 2001 level of $75.4 billion to $82.3 billion—an increase of $6.9 billion—including funds for a needed targeted pay raise, and an improved housing allowance.

—Requests $4.1 billion to improve the quality of family housing—an increase from $3.6 billion in the fiscal year 2001 budget.

—Requests the Congressionally required increased spending on defense health from the fiscal year 2001 level of $12.1 billion to $17.9 billion—an enormous 48 percent increase of $5.8 billion.

—Begins to reverse the neglect of maintenance and repair, requesting increased spending on operations and maintenance from the fiscal year 2001 level of $107.9 billion to $125.7 billion today—an increase of $17.8 billion.

—Fully funds Navy and Air Force OPTEMPO costs.

—Plants signposts for 21st Century transformation, proposing an increase in spending on RDT&E from the fiscal year 2001 level of $41 billion to $47.4 billion—an increase of $6.3 billion.

This budget also includes a commitment "realistic budgeting" in order to stop the pattern of annual "emergency" supplementals. For example, health care costs in the country are increasing at an annual rate of 13 percent. But the fiscal year 2001 budget provided just $12.1 billion for military healthcare—falling short of what was needed to cover that rate of increase by $1.4 billion.

By contrast, this 2002 budget proposes $17.9 billion for defense health—a $5.8 billion increase—that should allow us to cover a probable 12 percent growth in the costs of medical care and a likely 15 percent growth in the cost of pharmacy purchases. This means that, for the first time in years, the fiscal year 2002 budget should fund a realistic estimate for military health care costs.

Mr. Chairman, these are important investments. But let me be clear: this budget won't get us out of the hole we are in. Today, we are proposing a $328.9 billion defense budget for fiscal year 2002. But to keep the department going next year—fiscal year 2003—on a straight-line—no improvements, just covering the costs of inflation and realistic budgeting—we will need a budget of $347.2 billion. That is an $18.3 billion increase before including the additional investment that will be needed to modernize and transform the force for the future.

The point, Mr. Chairman, is that it took the U.S. government years to drive the Department of Defense into this hole, and, I regret to say, it is going to take us years to get out. It is a lot easier to do things right in the first place than it is to straighten things out after they've been done badly. But, that is the hand we've been dealt, and we need to get about the task of fixing it.

We need your support for the President's proposed increases in pay, housing, health care and quality of life for our men and women in uniform. We need your support to fund the increased cost of flying hours, tank miles and steaming hours for our forces. We need your support to begin to work off the backlog of facilities maintenance and repair, for weapons system maintenance and repair, for modernization, and for transformational research and development. These important investments will help lay the groundwork for 2003 transformation budget.

But we cannot transform our Armed Forces for the 21st Century unless we also transform the way the Department of Defense does business.

This Department used to be a technological leader—an engine of innovation. Today, with few exceptions, DOD can barely keep up with the pace of technological change, much less lead.

Consider: Since 1975 the Department has doubled the time it takes to produce a weapons system—at a time when the pace for new generations of technology has shortened from years to just 18 months. This virtually guarantees that many of DOD's newest weapons will be one or more technology generations old the day they are fielded.

The combination of internal inefficiencies and external constraints on the Department together ensure that DOD operates in a manner that is so slow, so ponderous, and so inefficient that whatever it ultimately does produce is late and wasteful of taxpayer dollars.

At the same time, DOD's processes and regulations have grown so onerous, that a number of commercial businesses—developing needed technologies—prefer not to do business with the Department.

If DOD is no longer the engine of innovation in the 21st Century, and if many of the private sector companies that are the engines of innovation prefer not to do business with us, how can we effectively transform to meet the challenges of the 21st Century?

This situation cannot stand. That is why, in the coming weeks we will lay out a plan to address the waste and duplication of effort at the Department. We will undertake initiatives to encourage cost savings, to foster a culture of intelligent risk taking, and to begin applying modern business practices to the way the Department does its business. We will outline specific cost savings that we are undertaking unilaterally, as well as structural reforms that will help lay the groundwork for further savings in the years ahead.

Our efforts will be guided by a new Senior Executive Council that includes the Undersecretary of Defense for Acquisition, Technology and Logistics Pete Aldridge, and the three Service Secretaries: Secretary of the Army Thomas White, Secretary of the Navy Gordon England, and Air Force Secretary James Roche. They are leading a new effort to bring the Department and its business practices into the 21st Century.

But while there are many things we are doing unilaterally to transform the Department, we cannot succeed without help from Congress.

For example, we need your support for our Efficient Facilities Initiative of 2001 ("EFI"), requesting Congressional authorization for a single round of military base closures and realignments in 2003.

Since the end of the Cold War, the number of men and women in uniform has come down over 40 percent. But there has not been a parallel reduction in facilities. People who have studied the problem conclude that we have roughly 20–25 percent more infrastructure than we need to support the force. That excess infrastructure is costing unnecessary tens of billions of dollars every year in unneeded rent, utilities, and maintenance. We estimate that after the first few years, EFI could save as much as $3.5 billion annually—money that could be better spent on priorities such as readiness, modernization, and quality of life improvements for our troops.

We need your support for the proposed revitalization of the B–1 bomber fleet. By reducing the fleet from 93 to 60 aircraft, concentrating the remaining aircraft in the two largest B–1 bases (rather than the five bases where they are scattered today), we can free up funds for the Air Force to rapidly modernize the remaining aircraft with new precision weapons, self-protection systems, and reliability upgrades so that they can remain viable for use in future conflicts. There has been a great deal of vocal opposition to this proposal, but it is the right thing to do and we need to get on with it.

This reform will add some $1.5 billion of advanced combat capability to today's aging B–1 fleet over the next five years—without requiring additional dollars from the taxpayers. It would revive the B–1 force, so that it can provide America with the kind of all-weather, long-range strike capabilities that will be critical in the 21st century.

Mr. Chairman, this is the kind of efficiency we owe the American taxpayers. Congressional support for this plan is needed to send an important signal to all of the Services, and give them an incentive to find further cost savings by telling them that such efforts will be rewarded with freed up funds to improve capabilities, rather than simply being bombarded with complaints for their efforts.

The failure of this proposal, by contrast, would send a harmful signal across the defense establishment that if the Services do step forward to find innovative ways to save money and to increase efficiency, not only it will be a waste of their time and effort, but it will lead to hostility to them and to the Department. That is not the message we want to send if we want to be respectful of the taxpayers' dollars and if we truly want to strengthen our national security.

We also need your support for the proposed elimination of the Peacekeeper missile. The previous Administration's 2002 budget included $100 million to fund oper-

ations, maintenance, and personnel support for the Peacekeeper, plus $5 million more for procurement support in 2002—but then it included not a dollar for follow-on funding for 2003 or beyond, either to sustain the missile squadron, or to retire them.

Rather than continue spending taxpayer's money on an unneeded system, we have proposed deactivating the Peacekeeper system over a five-year period. Doing so should avoid costs of $320 million during the deactivation, and then an additional $150 million annually thereafter.

Another area where we may also come to you with proposals for reform is in officer and enlisted career lengths. We're losing good people sooner than we need to. Today, we have policies that have the effect of uprooting enlisted personnel and families every few years to move them to new assignments—and then, after training them and benefiting from their fine services, half of them leave the service when they still have so much to offer. Similarly, we bring in commissioned officers, train them, bounce them around from assignment to assignment every two or three years, that they end up skipping across the top of the waves so fast they don't have time to learn from their mistakes. And then we have them retire in their late 40s and early 50s—while still in their prime. No private enterprise could survive functioning this way.

By undertaking both unilateral reforms, and reforms in cooperation with Congress, we can and will bring the Defense Department into the 21st Century. As President Bush told the Veterans of Foreign Wars two weeks ago, "We're not only going to spend more money on national defense—we're also going to spend it more wisely."

Mr. Chairman, we need to do so because the harsh reality is that the unmet needs of the U.S. Armed Forces far exceed the funds available to address them. So unless together we can turn waste into weapons, we will have to come to you next year and the year after that, asking you to appropriate still more of the taxpayers money to meet urgent needs—many of which could have been paid for by trimming cost savings from within.

Neither the transformation of U.S. Armed Forces nor the transformation of the Department will be easy. Change is hard. A philosopher once wrote: "there is nothing more difficult to plan . . . or more dangerous to manage than the creation of a new system. For the initiation has the enmity of all who would profit by the preservation of the old institution and merely the lukewarm defense of those who would gain by the new."

We have no choice. We are entering a world where new threats can emerge suddenly. We must have a military sized and structured to meet those challenges. And we must have a Department that is innovative, flexible and forward thinking if we are to meet those new and different threats.

To accomplish this, we need your help. As I said at the outset, we are in a hole. And the first rule of holes is; "when in a hole, stop digging." But each year we put off these critical investments, every year we "kick the can down the road", we are digging ourselves deeper and deeper into that hole. Each year we put off these investments, it will be vastly more difficult—and certainly much more expensive for the taxpayers—to fix the problems. It's like having a credit card—if you pay only the minimum every month, the interest will accumulate and the cost of digging out of debt gets bigger and bigger every year. That is what we have been doing to our Armed Forces.

Changing that requires a new strategy, a new force sizing construct, and new investments. We've been living off the investments of the 1980s for too long, to the detriment of our men and women in uniform. We have given insufficient attention to the risks to personnel, to modernization and to transformation.

The time has come to change that—to reinvigorate the morale and readiness of our force, and to prepare for the new and different challenges of this new and still dangerous century. The necessary first step to doing that is for Congress to approve the President's 2002 defense budget.

Thank you.

Senator INOUYE. I thank you very much, Mr. Secretary. May I now recognize General Shelton?

STATEMENT OF GENERAL HENRY H. SHELTON, USA, CHAIRMAN, JOINT CHIEFS OF STAFF

General SHELTON. Thank you, Chairman Inouye, Senator Stevens, and other distinguished members of this committee. Once again, it is my privilege to appear before you today and report to

you on the state of America's Armed Forces. I would like to highlight some key priorities from the written statement that I have provided for the record, and then move right into your questions.

Mr. Chairman, I have been a soldier now for 38 years, and as I reflect on the state of the military today, I am reminded of three important lessons that I have learned over those 38 years. The first is that in this legal profession of ours, our profession of arms, there simply is no substitute for being ready when the Nation calls, as you pointed out so eloquently in your article that appeared in Defense News this past week.

The second is that the military is about people, about our great men and women in uniform and their families. They have never let America down, and they never will. We must properly take care of their needs.

And third, we must always anticipate the threats of tomorrow, even as we deal with the challenges of today.

I share these lessons with you because we must not let the spirit of relative peace, as Senator Kohl commented on a while ago, and also relative period of prosperity, lead us down the path of complacency and blind us to a fundamental truth, and that is that the furies of history will return, and they will produce destruction and violence at a time and at a place and in a manner that we probably will not expect. We must therefore remain vigilant, and we must remain prepared.

Today, our military forces, and I refer to active, Guard, and Reserve, remain the best trained, best equipped, and most capable in the world, but before we congratulate ourselves, let me also say about our readiness that our people and our forces are experiencing some challenges which, if not addressed quickly, may erode our present-day advantage, and I would like to bring a number of these pressing issues to your attention.

First, if we should have to fight tomorrow, I am confident that our frontline troops are trained and ready. However, it is important to note that many other operational units are not as ready. These include our combat service support units, our strategic airlift fleet, our intelligence surveillance and reconnaissance aircraft and assets, and our training bases, all of which provide critical capabilities to our war-fighting forces.

These units are in some cases suffering the consequences of high op tempo, and the diversion of resources to sustain the near-term readiness of our first-to-fight forces.

We are also a very busy force. Since 1995, DOD has experienced a 133 percent increase in the number of personnel that are committed around the globe, and these are real-world operations, not exercises, and we are doing it with 9 percent fewer people than we had in 1995. This high operational tempo on segments of our force has increased the strain on our people, and has highlighted the imbalance that we have today between our strategy and our force structure.

Fixing this imbalance is part of the ongoing work in the QDR, and of course one of the top priorities for all of the Joint Chiefs, because the challenge will only increase over time, and we owe it to our people to get it right. In fact, through the QDR process, we are struggling to reconcile a number of competing demands, near-

term readiness, recruiting and retaining our high-quality forces, long-term modernization and recapitalization of our aging systems, transformation, and yes, the infrastructure investments that are essential to preserve the world's best war-fighting capability.

Secretary Rumsfeld commented on the fact that we have been living off our procurement accounts from the 1980's, and the smart reduction that we have had in the 1990's in our procurement accounts means that the average age of most of our major weapons systems continues to increase. Of course, many of these systems have already exceeded their planned service life, or are fast approaching it. Let me give you just a few examples.

Our frontline air superiority fighter, the F–15, averages 17 years, only 3 years away from the end of its original design service life. Our airborne tanker fleet and our B–52 bomber force are nearly 40 years old. Our intelligence, surveillance, reconnaissance, and our electronic warfare aircraft such as the RC–135, the Rivet Joint, the EP–3's, the P–3's, and our EA–6B Prowlers, all critical to our war-fighting capabilities, average between 19 and 38 years of service, and finally, numerous helicopter platforms, going back to Senator Shelby's comment, in all of our services have passed or are approaching their original designed service life, and of course these helicopters are a key part of our war-fighting capabilities in each of the services.

In fact, most of the war-fighting platforms that I just mentioned were fielded at a time when most of our kids were listening to a group called Three Dog Night, they were listening to it on the latest in technology, an 8-track tape deck, while sitting in the seat of their Ford Pinto. Technology has come a long way since then, and just like the 25-year-old Pinto, our aging fleets of aircraft, ships, and vehicles are requiring increased numbers of parts, and they are requiring increased maintenance support.

Let me give you a few examples that have been provided by our services, reflecting a recent trend with regards to our aging fleets. Between 1995 and the year 2000, the Air Force's F–15C model has seen a 38 percent increase in cost per flying hour, and a mission-capable rate that has dropped from 81 to 77 percent. The Navy EA–6B Prowler has seen a 55 percent increase in cost per flying hour, and mission capable rates that have dropped from 60 percent to 56 percent, and the Army's M–1 tank, at an average age of 14 years, has seen a 22-percent increase in cost per operating mile, and a mission-capable rate drop from 91 percent to 85 percent.

Now, while we have been successful, and I would even say highly successful, in meeting the demands of current operations, we have also been unable to significantly increase our investment in procurement, as Secretary Rumsfeld mentioned, in part due to the increasing costs associated with these platforms. If we do not increase our efforts in procurement, then we are left essentially with two choices. We can either retire these aging systems, or we can continue to maintain the old systems, resulting in increased costs, along with reduced operational capability.

The bottom line is, I do not believe we can efficiently sustain our current capabilities for much longer, much less pay for ongoing efforts to modernize and transform without an increase in resources.

But it is also important to remember these readiness issues have a tremendous impact on our people as well, requiring them to work harder and essentially do more with less, so let me now turn to a discussion on how we can better support our greatest asset, our men and women in uniform. Mr. Chairman, I believe that we have made real progress in the past 4 years providing long overdue support for our people, as well as for our families, and I would like to express my personal thanks and appreciation to the Congress and to this committee in particular for your outstanding role in helping take care of our troops.

Consider the following that we have accomplished: increases in pay and allowances, pay table reform, Tricare improvements, increased funding for housing, and making good on our health care promise to our active force as well as our retirees. But let me also say that I believe we need to sustain this momentum to preserve the long-term quality and readiness of the force. An important first step in this regard is a renewed effort to eliminate the significant pay gap that still exists between the military and the private sector.

A second related quality-of-life issue is the condition of our vital infrastructure, which continues to decay at an alarming rate. For quite some time now, budget constraints have forced us to make some hard choices, and we have had to redirect funds from military facilities and infrastructure accounts to support readiness requirements.

A quality force deserves quality facilities, and that is why I believe it is essential that we provide the resources that are necessary to stop and reverse the deterioration at our posts, our camps, our bases, and our stations. One way that Congress can directly help is to support DOD's efficient facilities initiative, to dispose of excess bases and facilities.

Third, I would ask your support to help ensure that all of our men and women in uniform, single, married, or unaccompanied, are provided with adequate housing. Unfortunately, this is not the case today. In fact, currently, 62 percent of our family housing units are classified as inadequate, which means that an astonishing percentage of our families are living in substandard housing. We simply cannot let this situation continue.

Finally, the other program that will greatly enhance the quality of life for our people is quality health care. Today, one of the most valuable recruiting and retention tools that a corporation can offer a workforce or a potential employee is a comprehensive medical package. Our Armed Forces are no different. For that reason, the Chiefs and I strongly urge the Congress to fully fund the defense health program as a strong signal that we are truly committed to providing health care for our troops. I cannot think of a better way to renew the bonds of trust between Uncle Sam and our service members and retirees than this commitment to military health care, and to quality health care.

With your continued support of these initiatives, I believe we can sustain our quality force and ensure that America's best and brightest continue to answer the Nation's call. They truly represent our present and our future security.

Since my last testimony, we have been reminded of the human element of national security in several profound ways. Last December, two U.S. Army helicopters crashed during a nighttime training mission in Hawaii, in Senator Inouye's home State. Nine soldiers perished in that crash. Some asked, why would the Army put their soldiers in harm's way, doing a dangerous training mission in the black of night. The answer is, that is what we do. We train for the most difficult missions that we may be asked to carry out. We must know that when America's interests are at stake, or when America's interests are threatened, we will be ready to go, day or night, and that failure is not an option.

Last March, five of our soldiers and one New Zealander were killed during a nighttime training incident that took place at Udori range in Kuwait during a close air support training mission. Some may ask, why would you schedule such an event? Why would aircraft be dropping live ordnance on a range in the Kuwaiti desert? The answer is, because that is what we do. We train our troops to launch their aircraft 24 hours a day, often in unfamiliar surroundings, often with night-vision goggles, and often in difficult weather, precisely because we do not know where the next fight may take place and under what conditions. We will ask that of our great soldiers, sailors, airmen and marines.

We must know, however, that when America's interests are threatened, we will be ready to go any time, day or night, because failure is not an option, and that, in fact, is the legacy of the honored dead that I have just mentioned.

We must work hard to minimize the risks to our great volunteer force, but we must train the way we anticipate fighting, and we will fight at night. I am very proud of the performance of these men and women, and many thousands of other individuals who proudly wear the uniform of our country. They are, as they have always been, America's decisive edge. Indeed, they are so good at what they do that unless there is an incident or an accident, we rarely take notice of their daily contributions to our national security. They sail their ships, they fly their aircraft, they go on patrol quietly and professionally, and America is safe and enjoying great prosperity in part because of them.

Mr. Chairman, as we consider new budgets and new national security strategies, and new ideas of transforming the force, it is important that we always remember that the quality of people in our military are critical to all that we hope to accomplish, and if we take action today to ensure that our men and women in uniform are properly taken care of, I am confident that we will prevail, regardless of the challenges that we face in the future.

We have an opportunity in the succeeding weeks and months to build a foundation that will sustain the U.S. military supremacy in the decades ahead. Our professional, highly trained and motivated young Americans in uniform are counting on us to make the right decisions. If we are successful, we will help underwrite the continued peace and prosperity that our Nation currently enjoys well into the future, and I would submit that your support is needed now more than ever.

As this could be, Mr. Chairman, and I emphasize could be, my last appearance before this committee, I would like to express my

profound gratitude for the opportunity to work with all of you during the past 4 years, and I thank each of you and Secretary Rumsfeld for your very kind words, and I can tell you that coming from such outstanding public servants, as they did, and such strong advocates for our troops, they mean a great deal to me.

I have a great feeling about what we collectively have achieved, and I also feel great about turning over the reins to General Dick Myers, a superb warrior, and a visionary leader. It has been my great honor to represent the hopes, the needs, and the aspirations of our great American servicemen and women, and I thank you for making your priorities their priorities.

PREPARED STATEMENT

Thank you very much, Mr. Chairman, and we look forward to your questions.

[The statement follows:]

PREPARED STATEMENT OF GENERAL HENRY H. SHELTON

SUSTAINING A QUALITY FORCE

America's best and brightest must continue to answer the clarion call to serve if our Nation is to remain the strongest force for peace and stability on the planet. It is the quality of our people that gives us a decisive edge over our adversaries and to sustain this qualitative edge we must support our personnel with continued investments in pay compensation, health care, housing, and other quality of life programs.

Compensation Gains

A robust economy coupled with intense competition from the private sector continues to challenge our ability to attract and retain the very people needed to operate our increasingly sophisticated military equipment. With Congressional efforts to bring military pay in line with the civilian sector, the Employment Cost Index plus 0.5 percent initiative, and the President's $1 billion plus-up to military pay, we are moving in the right direction.

Indeed, as a result of compensation gains in fiscal year 2000 and fiscal year 2001, we have made great strides toward improving the standards of living for members of our Armed Forces. With the significant support and help of this Committee, Congress, and the Administration, the Fiscal Year 2000 National Defense Authorization Act (NDAA) provided one of the largest pay raises in recent history, instituted retirement reform, and implemented pay table reform.

That same level of outstanding support was evident in the fiscal year 2001 NDAA which included a 3.7 percent pay increase and allowed us to replace out of pocket (OOP) costs for off base housing to less than 15 percent. Moreover, the opening of the Thrift Savings Plan to military members, the implementation of a monetary allowance for military members currently receiving food stamps, and revising the enlistment/retention bonus authority have also demonstrated to our forces a commitment to their quality of life. Again, this helps us attract and retain quality people.

It is important to emphasize, however, that we need to sustain the momentum of the past two years. The pay raise slated for fiscal year 2002 and your continued support of our efforts to reduce OOP expenses for housing to zero by fiscal year 2005 will further improve the quality of life for our servicemembers and their families. This is not only important for their well being, it is also critical to our efforts to recruit and retain a quality force.

Military Health Care

One of the most valued recruiting tools any major corporation can offer a potential employee is a comprehensive medical package. DOD is no different. Congress and the Administration have done much over the last year to address the health needs of our active duty and retired servicemembers and their families. As in the civilian sector, healthcare costs for the military community have continued to rise rapidly. Passage of the fiscal year 2001 NDAA demonstrated Congress' commitment to honor the promise to those currently serving and to those who served honorably in the past. I appreciate the support of Congress for this effort.

We are pursuing full funding of healthcare costs as a strong signal that we are truly committed to providing quality healthcare for our active duty military members, retirees and their families. This commitment will have a profound impact on all who wear our uniform, and will encourage those who are considering a military career. It is also imperative that we fund healthcare benefits for retirees and their families in such a manner that this funding no longer competes with operations, force structure, and readiness. This will honor the national commitment we made long ago to our military retirees, without impacting the readiness and military capability of today's force.

Additionally, the Joint Chiefs are working with the Assistant Secretary of Defense for Health Affairs in seeking business practice improvements and implementing the new benefits identified in the fiscal year 2001 NDAA. And, beginning in fiscal year 2002, TRICARE will pay costs not covered by Medicare for over-65 retirees and their families.

Housing

Housing continues to be a core element in our efforts to improve the quality of life for our service members. All our men and women in uniform deserve adequate housing. The Services remain on track with plans to eliminate inadequate housing for unaccompanied enlisted personnel by 2008. The situation for family housing is more challenging. Last year, the Service Family Housing Master Plans deemed almost 61 percent of family housing units inadequate. The Services are revamping their respective Family Housing Master Plans to revitalize, privatize, or demolish these inadequate units by 2010.

Congressional support for DOD's three-pronged strategy to improve family housing has been outstanding and is greatly appreciated. First, the initiative to raise housing allowances to reduce out-of-pocket expenses for our servicemembers has provided welcome relief to the force. Second, creating smart partnerships with the private sector makes defense dollars go further and effectively frees up resources to revitalize existing housing. Finally, your continued efforts to fund our construction and privatization programs will pay great dividends by ensuring our servicemembers and their families can live in respectable accommodations.

There is an inseparable, direct link between personal and family readiness and our total force combat readiness. Your continued support of these and other quality of life programs will provide substantial returns in retaining not just the member, but also the family.

BUILDING TOMORROW'S JOINT FORCE

In this section, I present some of my thoughts on those actions we are taking today, to build tomorrow's joint force. In my view, these are the critical enablers for any new defense strategy designed to confront the challenges of this 21st century.

Modernization

While recent funding increases have arrested the decline in current readiness, our modernization accounts, which are critical to future readiness, remain under funded. Solving this problem has become my most urgent priority.

Modernization will help reduce our capability concerns by leveraging advanced technology to improve interoperability. Also, newer, technologically advanced Intelligence, Surveillance, and Reconnaissance (ISR) collection assets, communications systems, and logistics support systems will help reduce manpower requirements while simultaneously improving the CINCs' warfighting capabilities. Modernization is also necessary for improved operational flexibility and to ensure that we retain a technological and qualitative superiority on the battlefield.

We must modernize our force; however, we must not sacrifice current readiness to do it.

Recapitalization of Force Structure

After the Cold War, we made a conscious decision to cut procurement and live off the investments of the eighties as we reduced force structure. Between fiscal years 1993–98, approximately $100 billion was taken out of DOD procurement accounts. The 1997 QDR Report identified a potentially serious procurement problem if we did not increase investment in new platforms and equipment. A goal of $60 billion in procurement was established as an interim target to recover from the sharply reduced procurement spending in fiscal year 1993–98. Last year, for the first time, this interim goal was achieved.

However, several recent studies, to include one by the Congressional Budget Office, have concluded that $60 billion is not sufficient to sustain the force. Since the QDR will determine the strategy and size of the force, I cannot give you a precise

recommendation on the additional amount required. What is clear today is that we must accelerate the pace of replacing our aging and worn systems if we are to deliver the right capability to meet future challenges. We simply cannot continue to defer procurement and continue our usage at existing rates if we expect our force to meet all of our 21st century commitments.

Recapitalization of Infrastructure

Our vital infrastructure is decaying. The understandable desire for a post-Cold War peace dividend forced us to make hard choices that redirected funds from military facilities and infrastructure accounts to support immediate readiness requirements. Years of belt-tightening have increased the risk of facility failures and have added to the costs of upkeep.

Within civilian industry, the replacement, restoration or modernization of physical plant assets is accomplished in roughly a 50-year cycle. The rate of investment in DOD infrastructure has fallen to a level that requires over 100 years for recapitalization. We must find the resources to accelerate the recapitalization of our infrastructure to avoid further damage and degradation. A sustained period of increased funding is required to develop a modern infrastructure capable of supporting our 21st century force and the next generation of weapon systems.

In its current state, the DOD infrastructure is still capable of supporting the National Military Strategy; however, in some locations, we face a high risk of operational limitations that may affect mission success. Throughout DOD, installation readiness is at an all-time low. In fact, 60 percent of our infrastructure is rated C–3 (some failures) or C–4 (major problems). It is particularly alarming that the current condition of training and operational facilities is lower than any other facility category in DOD. Usage restrictions and the shortage of required training ranges and operating areas slowly but inevitably degrade the readiness of our operational units. The poor material condition of facilities also directly contributes to lost or degraded training opportunities.

In sum, our deteriorating infrastructure continues to impair readiness and detract from the quality of life of our service members and their families. I ask you to support our efforts to fix this problem, because it effectively reduces the efficiency of our uniformed and civilian workforce and further lowers retention rates for highly qualified and otherwise motivated personnel. A world class fighting force requires mission-ready facilities.

Additionally, we sorely need further base closure rounds as part of our overall recapitalization effort. According to the April 1998 DOD BRAC Report, we have 23 percent excess base capacity in the United States, a situation that directly impacts the ability of the Service Chiefs to provide, train, maintain, and equip today's force. By removing validated excess capacity, we could save $3 billion per year in the long-term. This money would then be available to fund appropriately our remaining bases and help fix the remaining infrastructure.

TRANSFORMATION

Joint Vision 2020

Our future force must be a seamless joint force and our roadmap for achieving this joint force is detailed in Joint Vision 2020 (JV 2020). Although the Services are busily engaged in the transformation of their respective forces, in my view these individual transformations will be most effective operationally only if they mesh fully with the more encompassing joint transformation called for in JV 2020.

A key feature of this transformation will be the implementation of dominant maneuver, precision engagement, focused logistics, and full dimensional protection in the context of Joint Task Force (JTF) operations. Today, we successfully execute JTF operations when they are needed. But, in my view, we will be more responsive and agile in the future with JTF operations as our "national military core competency." This goal will not be achieved through technology and materiel solutions alone. It will also require intellectual innovation and the development of doctrine, organizations, training and education, leaders, people, and facilities that effectively make use of new technologies.

Using JV 2020 as a conceptual template, the goal of our joint transformation effort is a force that is dominant across the full spectrum of military operations. DOD is seeking to transform its forces to meet future challenges through a comprehensive plan that integrates activities in several areas: Service concept development and experimentation efforts; joint concept development and experimentation designed to integrate Service capabilities where possible and develop joint solutions where necessary; implementation processes in the Services and joint community to identify

rapidly the most promising of the new concepts; and Science and Technology efforts focused on areas that can enhance U.S. military capabilities.

This overall transformation effort is not focused solely on U.S. military capabilities. USJFCOM has developed an aggressive plan for outreach to multinational partners as well. Our objective is to bring allied perspectives into the concept development process to facilitate our future ability to operate effectively within a coalition environment.

Based on joint experimentation and implementation programs, we expect to see some new capabilities that will be operational well before 2020, while other promising concepts will continue to be explored and developed. Our overarching goal is to bring these various capabilities together in a coherent and synchronized fashion.

OTHER TRANSFORMATION ISSUES

Logistics Transformation

Our goal for logistics transformation is to provide the joint warfighter real-time logistics situational awareness by leveraging technology and optimizing logistics processes. The Defense Reform Initiative Directive #54, Logistics Transformation Plans, establishes a framework of objectives and a means to measure progress toward accomplishing this goal.

Ultimately, we must create a network-centric environment in which data can be accessed in real time at its source. This network-centric environment will provide the warfighter with operationally relevant logistics information necessary to make accurate, timely decisions and to maintain our military advantage into the next decades.

Mobility

We are making significant improvements in our ability to deploy forces. Our fleet of 35-year old C–141s is being replaced with C–17s, and numerous conventional break-bulk cargo ships are being replaced by Large Medium Speed Roll-on Roll-off ships. However, we foresee increased challenges and stresses to the mobility system. These challenges were carefully examined in the comprehensive two-year Mobility Requirements Study 05 (MRS–05). The study determined that programmed strategic lift capability falls short of requirements for both CONUS and inter-theater missions. MRS–05 also determined that increased capability is needed within theaters to move equipment and supplies forward from pre-positioning sites, airports, and seaports. Consequently, we are aggressively pursuing policy changes, host-nation agreements, and, where necessary, considering new equipment as part of the 2001 QDR to ensure timely force deployment. More than ever, Congressional support of strategic lift is needed if we are to build a national mobility capability sufficient for our current and future needs.

Joint Interoperability

We have made progress in the area of interoperability with an overall effort focused on creating a force that is ready to fight as a coherent joint unit, fully interoperable, and seamlessly integrated. Our long-term goal is to require that interoperability be "designed in" at the beginning of the development process rather than "forced in" after the fact. We intend to achieve this goal through improvements in the requirements generation process, including establishment of interoperability Key Performance Parameters (KPPs) and Information Exchange Requirements (IERs) in systems development. A requirements-based Joint Operations Architecture, well grounded in joint doctrine, will provide a roadmap for addressing interoperability issues across the full spectrum of capabilities. These efforts will enable DOD's senior leadership to focus more on interoperability and integration of the joint force.

INTELLIGENCE AND COMMUNICATIONS TRANSFORMATION

Intelligence, Surveillance & Reconnaissance

Achieving and maintaining a decisive advantage in our ability to access, gather, exploit, and act on information remains a critical aspect of our combat capability and readiness. A full spectrum ISR capability is the mainstay of that concept. To achieve this, we need to place more emphasis on the capability to "watch" or "stare at" targeted objectives with collection systems able to monitor, track, characterize, and report on moving objects and dynamic events as they occur in the battlespace. In other words, a constant rather than periodic sensor access is required.

Intelligence Interoperability

Intelligence interoperability is the foundation of our capability for dominant battlespace awareness. Our goal is to ensure that our forces retain an information edge over potential adversaries. To be fully interoperable, intelligence must be produced and delivered in a fashion that immediately supports command decision making and mission execution. We are gradually tearing down barriers to interoperability between intelligence and operations systems to ensure we provide the Common Operating Picture essential to future command and control. The Common Operating Picture will provide a unified view of the battlespace for the soldier in the field, the pilot in the cockpit, and the commander, regardless of location.

Intelligence Federation

The Intelligence Federation is a new concept wherein designated commands and units provide specified intelligence support to an engaged CINC during a crisis or contingency operation using a pre-planned methodology tailored to that CINC's area of responsibility and operational requirements. The concept evolved from the growing need to ensure the collective resources of the intelligence community function as a "system of systems," so that users are able to receive information tailored to their unique requirements, and with the necessary fidelity. To do this effectively, we need to create a federation among intelligence components using Joint Tactics, Techniques, and Procedures.

Global Information Grid (GIG)

The CINCs testified last year that a major warfighting deficiency in some theaters is the inability to plan quickly and execute decisively because of C4 deficiencies. I wholeheartedly agree. Simply put, our C4 infrastructure falls short of what is needed to support properly our decision makers and the men and women on the front lines. To help alleviate this shortfall, we must ensure that our warfighters have full and reliable access to the GIG from any point on the globe. The GIG is the globally interconnected, end-to-end set of information capabilities, associated processes, and personnel that we are developing to manage and provide information on demand to warfighters, policy makers, and supporting personnel. I believe that our ongoing efforts to bring the GIG online will provide the foundation for information superiority on the battlefield in the decades ahead. To that end, it is necessary to continue to invest in and upgrade the GIG infrastructure. Satellites, fiber optic cables, support of network operations, information assurance programs, and DOD's use of the radio frequency spectrum, are all tremendously important to achieving this goal.

Radio Frequency Spectrum Access

There is an important debate ongoing concerning the proposed reallocation of a segment of the DOD radio frequency spectrum to commercial users, an initiative with the potential to disrupt our transformation effort. In the last 8 years, 247 MHz of the RF spectrum for Federal use, primarily used by DOD, has been reallocated for commercial use by the private sector. I am concerned that further reallocation of frequency spectrum for commercial use, without comparable spectrum to execute DOD's critical functions, will have a major impact on our ability to execute our missions. Our success on the battlefield largely depends on our ability to use advanced communications technology to exchange vital information between decision-makers, commanders, and deployed forces.

One of the principal areas of interest to the private sector is the 1,755–1,850 MHz band. This band is currently used for tactical data links; satellite telemetry, tracking, and control; precision guided weapons; air combat training systems; and the delivery of voice, video, and data information to warfighters and commanders in the field. These systems are indispensable to our national defense. Some industry advocates have suggested that DOD share segments of this frequency band or relocate to another operationally suitable spectrum. I believe this proposal is problematic for two reasons. First, according to our analysis, sharing with commercial users is not possible due to interference over large geographical areas and metropolitan centers. Second, moving DOD communications to a different, but comparable, spectrum could be problematic due to the lengthy transition period required. Some national security satellites will use this frequency band well into the future. If directed to move, a more detailed cost and transition timeline will be required to ensure continuity of our nation's defense capabilities. It is imperative that we strike a reasonable and informed balance between commercial needs and military requirements. I understand that there is a White House process, led by the National Security Council and the National Economic Council, which is reviewing this issue to achieve this balance, critical for national security. We anticipate that suitable solutions will be found that are acceptable to all parties.

CONCLUSION

Today, even as we seek to transform our force to face an evolving security environment, our goals remain firm. We must protect America's interests, deter aggression, support peaceful resolution of disputes and most importantly, to be ready to intervene or respond to a conflict and win decisively.

This is a critically important time for our Nation as we move further into the new millennium as the only global superpower. It is clear that we have a great deal of work to do with the Administration and Congress as we develop a new NSS and support the requirements of the QDR. Our professional, highly trained, and motivated young Americans in uniform are counting on us to make the right decisions. We have an opportunity in the months ahead to build on successes, address the challenges, and sustain and support our dedicated forces. We must provide our warfighting forces with the best tools available as they defend America's interests, and we must shape a future force that will help us achieve our national security objectives well into the 21st century. Together, I am confident we can capitalize on this opportunity.

Senator INOUYE. I thank you very much, General Shelton. Once again, thank you for your service to our Nation.

General SHELTON. Thanks, Mr. Chairman.

Senator INOUYE. I will be asking all members to limit their questioning to 5 minutes, because of the limitation of time.

NEED FOR ADDED DEFENSE SPENDING

Mr. Secretary, as several of us have indicated, the budget resolution states very clearly that we may allocate the additional $18.4 billion if this would not use up the Medicare surplus. OMB and CBO have both indicated that it will use up the Medicare surplus. If that circumstance continues to the moment we consider this measure, we have a few terrible options, one, a general reduction, one going back to the drawingboard and looking at priorities, another declaring an emergency, which I think would be a farce, and seeking a waiver of the budget provision, which I have recommended to this subcommittee, and that would require 60 votes. What would you suggest that we do, sir?

Secretary RUMSFELD. Mr. Chairman, I am here to present the budget for the Department of Defense, and of course your questions, and the important questions that others have raised, relate to the Federal budget overall, which is the purview of this committee and this Congress, as well as the President of the United States.

All I can say in response is that there is no question but that the Department of Defense needs every nickel of this budget. You are correct in your opening statement. The President has been unambiguous on this subject. He has been very forthright. It is not possible, given the totality of the budget, to say which Department's budget is the one that is pushing against the self-imposed constraints of this Congress.

What we do know is that the President said his priorities are defense and education, and he has said it repeatedly, and I certainly agree with him.

Senator INOUYE. In other words, you would not suggest any reduction in defense spending?

Secretary RUMSFELD. Absolutely not, Mr. Chairman.

Senator INOUYE. That would mean you would reject a general reduction across the board?

Secretary RUMSFELD. That is, of course, not for the Secretary of Defense to even opine on. That is a presidential decision as to what he wants to do, but what he has said thus far is very clear, that his priority is defense and education.

Senator INOUYE. Would the Secretary of Defense and the administration object if the Congress decided to waive the restrictions set forth in the budget resolution and allocate the funds, notwithstanding the fact that the Medicare surplus has been depleted?

Secretary RUMSFELD. Well, Mr. Chairman, as I have indicated, that is a presidential decision and not one that I can make myself.

Senator INOUYE. And you have received no indication from the White House?

Secretary RUMSFELD. Other than what I have stated, that his priority is defense and education.

BASE CLOSURES

Senator INOUYE. Mr. Secretary, in your prepared testimony, you mention efficient facilities initiative of 2001. Am I to assume this covers base closures?

Secretary RUMSFELD. Yes, sir.

Senator INOUYE. What are your thoughts on base closures, sir?

Secretary RUMSFELD. My thoughts are several, first that it is the last thing in the world anyone with any sense would like to propose to the Congress, that they go to their House and Senate Members and suggest that they have to close some bases in their districts when they do not want to close them, so I did not do this willingly. I do it out of necessity. There is no question, everyone who looks at this, every one of the Chiefs of Staff, the Chairman, the Vice Chairman, every single one comes and says, we simply must close some bases.

The estimates by the experts, I am no expert, but the experts suggest that somewhere between 20 and 25 percent of our base structure is not needed.

I certainly agree that we ought to address the base structure around the world as well, but we have to address it in the United States in my view, and that is why we have come forward with it.

Senator INOUYE. Are you recommending that certain bases be closed?

Secretary RUMSFELD. I am recommending that the initiative that has been put forward to Congress, which is for an additional round of the existing legislation, be approved by the Congress so that a proposal can be made ultimately to the Congress for base closures.

Senator INOUYE. The committee has been advised that there are—I notice that my time is up, sir, so may I now call upon Senator Stevens.

POSTPONED PROCUREMENT PROGRAMS

Senator STEVENS. Mr. Secretary, there are a great many examples of systems that have been in R&D since the 1990's that have not come out of R&D because we have stretched them out. Both the administration and the Congress agreed the Comanche and the Crusader artillery systems in the Army, the B–22, the advanced amphibious assault vehicle for the Marine Corps, the pressures that we have had in the past, that also applies to the LPD–17 for

the Navy, originally funded in 1996, and yet construction only began in the year 2000.

You have inherited a lot of postponed programs. I assume that you have reviewed them as part of your current review. Have you come to a conclusion about any of those that ought to be terminated, or what to do about getting into position where we can move them from R&D into production and deployment?

Secretary RUMSFELD. Senator Stevens, the way this process is working is that the quadrennial defense review is coming towards a close. The defense planning guidance has been given to the Department and the components, along with some specific guidance as to things that the administration believes that they ought to budget for and fund for.

The services and the components are then asked to come back in the normal budgeting process, and that will take place later this month, and in October and in November, in preparation for the 2003 budget.

The services will be making their recommendations to me and to Deputy Secretary, and to the Department officials, senior officials, as to what they think their priorities ought to be. In that process, they will recommend, I am certain, some things be discontinued and some things be brought forward, but you are quite right, it is not unusual with research and development that a number of things get started and only some of them eventually are fully funded and deployed.

NAVY SHIPBUILDING

Senator STEVENS. We will await that report. Let me move on to another thing that I have been working on for sometime, but unsuccessfully. The current rate of production of new vessels for the Navy will sustain only a fleet of about 250 ships by 2010. The rate of replacement is woefully low, and the process of acquisitions is really almost stalled. We have had poor performance on several of the shipbuilding programs. Your budget request before us now has $800 million solely to pay for cost overruns in ship procurement.

I have tried to get the Navy to adopt the procedure followed by the Coast Guard for a long time. It is called advanced appropriations. It deals with putting into play the acquisition of multiple ships and not fully funding each one as we get the authorization.

The Navy now tells us they are going to have another one-half billion dollars needed to pay for cost overruns on ships prior to construction contracts for 2002. It is my understanding the administration has turned down the concept of advanced appropriations and allowing us to go forward with multiple ship acquisition through a concept of annual appropriations. Why?

Secretary RUMSFELD. I may ask Dr. Zakheim to comment on this, but it is correct that at the present time the Office of Management and Budget does not favor the idea of advanced appropriations for ships. It has a number of advantages, obviously, from our standpoint, from the Department of Defense's standpoint, because you can begin the process of moving along with a more robust shipbuilding program than you can without advanced appropriations.

The argument they make, I suppose, is that it creates a mortgage for the future that concerns them, and it is something that is being discussed within the administration.

Senator STEVENS. I think the current system encourages cost overruns. I cannot think of one single Navy ship that has been built since I have been here that did not have cost overruns, but if you turn around and look at the fixed price contracts for the Air Force or for the tanks, we have been able to have some sort of cost control.

The problem is that they get the money, they put it in the bank, and they do not care when the ship comes off because they have already got the money. Now, I think there ought to be something done about that, and I hope that you will take another look at it.

INTERIM BRIGADE COMBAT TEAMS

I am running out of time, so I will run along. We accelerated the deployment of the second interim brigade combat team, the so-called IBCT. This is General Shinseki's transformation initiative approved by the Chairman of the Joint Chiefs, which we think offers a great opportunity for us to move the Army into their full needs for the 21st Century.

We have—well, first, do you support the whole concept of these interim brigade combat teams? They are interim because we still have a transition out there for the future, but do you support the creation of them?

Secretary RUMSFELD. I think that the approach that the Army is taking has been a good one, yes.

Senator STEVENS. Will your budget fully fund the expansion of the concept announced by the Army?

Secretary RUMSFELD. As I indicated earlier, those are the kind of tradeoffs that take place. I do not even know if the Army will propose that when they come back to us, but those are the kinds of tradeoffs that get taken care of and addressed during the budget bill which is in the September–October period.

Senator STEVENS. I am done. I have a lot of other questions I would like to ask. I do hope we will have a chance to confer with you along the line before we face the proposition of confrontation at the very last minute on this 2002 budget. Thank you, Mr. Chairman.

Senator INOUYE. Thank you. Senator Leahy.

CHINESE MILITARY CAPABILITIES

Senator LEAHY. Thank you, Mr. Chairman. I appreciate the fact that you responded to the concerns that I and Senator Feinstein and others raised about China. I must tell you, on Sunday I was in Europe when this article came out. I know you said you have talked to others, including Dr. Rice, although her quotes in the New York Times article did not give a great deal of comfort to those of us who are concerned about China expanding their nuclear capability, and a number of European allies I talked with were also concerned.

The articles at least give the impression that the administration feels that China needs to increase their nuclear stockpile to accommodate their comfort level about a possible nuclear shield, or mis-

sile defense system here in the United States. Now, I think the future Chinese nuclear stockpile is one of the more worrisome aspects of all international security, and frankly the concern about a missile from a rogue State, one that would come here with a return address on it, is a lot less worrisome to me than an international nuclear arms race. I think we sometimes bend over backwards to look at a small problem and ignore a much bigger one.

If you are really into nuclear proliferation, I mean, I do not see how that helps us, especially when our defenses are more and more contingent on the ability of our intelligence to counteract serious terrorism threats. I am not so concerned about the missile being lobbed by a rogue State coming wobbling over the horizon at us, when we will know where it is coming from, than I am about the small ship that comes into New York Harbor or off the coast of California and loaded with a large nuclear weapon, just as I am concerned about a McVeigh or somebody like that in our own country that might bring about a terrorist attack.

So can you assure us, categorically, Mr. Secretary, that we are not, directly or indirectly, giving a green light to China to increase their nuclear arsenal without any concern being expressed by us?

Secretary RUMSFELD. Well, Senator Leahy, I suffer from not having read all of the articles about this. As you, I returned to town and saw the flurry of all these articles, and statements, and counterstatements, and what have you.

Senator LEAHY. Well, resuming from the articles, is it the administration's position to give either indirectly or directly the signal to China that we are not going to resist their increasing of their nuclear arsenal?

Secretary RUMSFELD. I am told that there is no one in a position of authority in the Bush administration in the foreign policy area, which I am not, but Secretary Powell and Condi Rice are, who has any intention of giving a green light to China, period, or in exchange for anything. Now, that is what I know.

You mentioned the risk of an international nuclear arms race. I mean, quite the contrary, it seems to me, the President of the United States has indicated he wants to significantly lower the number of nuclear weapons, offensive nuclear weapons in the United States stockpile. He has me engaged in a congressionally mandated nuclear posture review, which I am well along on and should complete well before the deadline at the end of the year. It is his announced intention to reduce the number of weapons. I know that from my meetings with the Russians, that their intention is to reduce the number of weapons, and I think that the risk of a nuclear arms race is really not something that is likely.

There is no question but that China has been increasing its defense budget in double digits, and in not just ballistic missiles, longer range and shorter range, and nuclear, but mostly nonnuclear, and they are doing what they are doing. I also agree with you that it is unwritten exactly how China is going to engage the rest of the world and its neighbors. Certainly we ought to be doing everything we can to see that they engage the world in a peaceful and rational way.

Senator LEAHY. There are some aspects of this that maybe I should discuss with you or your staff, because it would require

going into some highly classified areas that I do not want to, would not discuss here in an open session, and we just have to set up a time with some of your staff to do that.

Secretary RUMSFELD. Good.

MODERNIZATION AND THE RESERVE COMPONENTS

Senator LEAHY. I also would like to hear more about the plans to modernize our Armed Forces, but especially the National Guard. Senator Bond made some reference to this. He and I chaired the National Guard Caucus here in the Senate, doing more and more on the efforts to carry on our national defense, especially as we go on to other parts of the world, sometimes for short-term, sometimes for long-term, where they are using a lot of aging equipment. I think of the F–16, beginning to develop cracks in its airframe and so on.

How will the soon-to-be-released defense strategy address the National Guard modernization? I mean, will there be an increased transfer of equipment to them, more modern equipment, the purchase of new equipment? I mean, how are they going to figure in this? If they are going to be part of our strategy, are they going to do it with equipment that works, or old equipment?

Secretary RUMSFELD. Those kinds of decisions, of course, are the ones that are being considered now by the service components, and will be coming out over the coming weeks.

In answer to you and Senator Bond, let me say that I certainly believe in the Guard and the Reserves and in the total force concept. As a matter of fact, after I left the Navy as a naval aviator I was a weekend warrior in the Reserves for the Navy.

As you also probably know, one of the brigades of the new transformational interim brigade combat teams is a Guard brigade, in Pennsylvania, as I recall, so the Guard and Reserve—and they are active in Bosnia and Kosovo, the Guard and Reserve, so they play a very important role, and the quadrennial defense review did not have the time to address them in a thoughtful way, so it will be done as a subset, and we will proceed over the coming weeks and months, very likely, in a more thorough way than the QDR was able to address them.

Senator LEAHY. Thank you.

Senator INOUYE. Thank you very much. Senator Shelby.

CHEMICAL DEMILITARIZATION

Senator SHELBY. Thank you, Mr. Chairman.

Mr. Secretary, a $1 billion chemical incinerator stands on the Anniston Army Depot in my State. Big issues like buying F–22's and fielding a missile defense are very important to our national security, I believe, and because of their budget implications they tend to dominate our discussions here and out in the halls, but a very important issue, Mr. Secretary, to some of us is the chemical demilitarization program. You are very familiar with this, and I know General Shelton is.

While I think most observers were pleased when you acted earlier this year, Mr. Secretary, to elevate the chemical demilitarization program to what you call an acquisition category 1 defense program under the control of Secretary Pete Aldrich, that cloud of

distrust remains in the communities in the United States, including my State, where the chemical stockpiles are.

I believe, Mr. Secretary, that Secretary Aldrich has assumed the central leadership role, and so far has shown a willingness to reach out to the communities in my State and others. I hope he understands the problems which exist in Alabama and these other States with the chemical stockpile emergency preparedness program. They call it, I believe, CSEP. The recent General Accounting Office (GAO) report on the program should serve as a guide to fixing these problems, I believe. This program has not turned the corner, and continues to be in need of deep organizational reform.

We are quickly approaching our burn date in my State of Alabama, and burn, as you well know, they start burning the chemicals, and the people that live in these neighborhoods get nervous, as you would and I would. It is a point where I believe maximum protection must be in place for the community, and I do not believe it is today.

Meanwhile, Mr. Secretary, agreement on whether the right safety measures are in place is anything but unanimous. The facility in Alabama, I can tell you, I cannot wait myself until the last chemical round is destroyed, as you would be, at the depot, and I am very concerned about where this program is right now in my State and some other States.

Mr. Secretary, as the person, the Secretary of Defense, with the ultimate responsibility for the program, could you share your thoughts with us about where the chemical demilitarization program is as a whole, and take a moment or two to comment on the health of the CSEP program, the preparedness, because a lot of people, when they start operating that $1 billion incinerator in my State of Alabama, Anniston, Alabama, are going to be nervous. Should they be nervous? I know that is a lot of it.

Secretary RUMSFELD. It is a lot.

Senator SHELBY. But it is an important issue, too, though.

Secretary RUMSFELD. It is something that I recognize, from the standpoint of any community, is enormously important, and it is the responsibility of the Department of Defense to see that we are as attentive as is humanly possible to the proper safety measures, and the appropriate protections for the people in the region. It is a program that has had its difficulties, as you point out, not only from the standpoint of timing.

It is also the kind of a program that I think is inherently going to generate a variety of views and opinions and controversy.

Senator SHELBY. And concerns.

Secretary RUMSFELD. Concerns, legitimate concerns. It is just inevitable, but also debate as to what is the appropriate safety measure, and what is the appropriate approach, just as most things scientific and technical do.

Pete Aldrich is on top of it. I am told that the program is going to be addressed tomorrow at the Defense Acquisition Board by Secretary Aldrich, and he is a very talented and competent person who I know shares your respect for the sensitivities.

Senator SHELBY. Sure, but the people who live in these communities, 150, 200,000, in that area, are concerned, and should be concerned. Would you not agree?

Secretary RUMSFELD. You bet. I mean, there is no question but that we are dealing with some very dangerous chemicals.

Senator SHELBY. Absolutely.

INTEROPERABILITY WITH ALLIES

General Shelton, I just have a minute, but I am concerned about what General Ralston has called basically, to paraphrase, the growing gap of technology between the United States and our European allies. You are very familiar with all of this. Lord George Robertson said, and I will quote him, "we have a glaring Transatlantic capability gap, and interoperability problem between the allies."

What initiatives are underway to address this interoperability problem with our allies, because since our allies' for the most part current military structure's military budgets do very little to narrow this interoperability gap, and if the technological and budgetary trends remain the same, do you not think the service unfunded requirements, the huge cost of modernization, become even more critical if we hope to be able to execute further contingencies and defend against threats? Is that real, and is it a growing concern? Obviously it is for the Europeans.

General SHELTON. Well, yes, sir, and I think, as we saw during Operation Allied Force, and this is when it was really brought to light. I will not say first came to light, because we had started working on this issue even before Allied Force, which was the Kosovo operation, but Allied Force highlighted the growing gap between our allies and the United States forces, and really got our attention focused on the way ahead, and how we ensure that in this world of interoperability, that we can keep that gap as narrow as we possibly can through tactics, techniques, procedures, et cetera.

But also simultaneously kind of a dual track approach through the defense capabilities initiative that was initiated was to bring them into the fold, if you will, show them the direction in which we are headed, and solicit their voluntary participation in some of these programs as well as continuing to stress the need to place adequate funding in their own budget to not let this gap get too large.

Senator SHELBY. But if it continues, the trend continues, they are going to fall further behind. That is just common sense.

General SHELTON. And that has been a concern, but at the same time that we see this developing, we do not want to send our people into harm's way with second class technology in any way, shape, or form, and so while we continue to modernize and try to stay on the leading edge of technology, we also look for ways that we can, through nontechnical means, if you will, reduce that interoperability gap between us and our allies through either tactics, techniques, procedures, and work-arounds, if you will, and we have been successful in a number of areas in that regard.

Senator SHELBY. Thank you.

Senator INOUYE. Thank you very much. Senator Hollings.

Senator HOLLINGS. Thank you, Mr. Chairman. I will use my minute just to comment.

General Shelton, with no reflection on General Myers, if I were the President I would reappoint you. We are lucky to have had you.

And Secretary Rumsfeld, we are more than lucky to have you. I have been getting disillusioned. I have been listening to Secretaries up here for almost 35 years, and you have given us a very, very comprehensive, visionary presentation of the needs of Defense, and I am going to support you in every regard that I possibly can.

Your problem is your Commander-in-Chief is running around hollering, cut spending, hey, watch that Congress, they are spending, they are spending, Congress. That is outrageous nonsense. He favors $7 billion more we are going to need on agriculture, he favors and in fact sponsored the $7 billion more over 3 years that we need in education, and now you are coming asking for the $18 billion more, or whatever, and I am trying to help you, and you are trying to get it, and you are saying every nickel is needed, and I know everybody is going to vote for the farm, and I know everybody is going to vote for education, but you can tell from the questioning everybody is not going to vote for every nickel, and that is going to cut you back, so just ask the Commander-in-Chief to cut that shabby political charade out so that we can get to work and really provide the money you need.

Thank you, Mr. Chairman.

Senator INOUYE. I thank you, sir. Senator Domenici.

Senator DOMENICI. Mr. Chairman, might I say to Senator Hollings I think I have been heard in the last couple of weeks that I think in a time of recession, which we are now in, that it is better to spend more money than cut programs. That may be translated into agreeing with what you have been saying, what you are just saying, but I have not had a chance to ask the administration how they feel about these other add-ons. There are going to be add-ons, and there are going to be add-ons in this one.

First I want to say to the General. I did not congratulate you. Since I am here, I want to say congratulations.

General SHELTON. Thank you, sir.

Senator DOMENICI. And Mr. Secretary, I want to say I am glad you come to New Mexico frequently. I cannot be up there as often as you of late, at least, because I have a little more work to do in other parts of the State than you do up in the Taos area. You live in a beautiful part of our State part-time. We are glad to have you.

Now, let me see if I can explain this a little bit different one more time, very quickly. First, Senator Inouye, there is no point of order for breaching the social security accumulation as part of the surplus, and there is none on Medicare.

There may be a point of order arise at a point in time on the total of the budget of the programs that the appropriators do. We might exceed the budget allocation to the various committees, in which event there will be a point of order against the last bill through, which would probably be this one.

Now, let me see if I can explain a little differently what has happened to the Defense Department. We produce a budget resolution. We have had 10½ years of prosperity, which means we have been collecting enormous amounts of revenue. So we are estimating in this budget resolution that we are going to continue to grow by about 2.7 percent, and so what we say is, there will be plenty of revenues to pay for what the Defense Department needs.

Then, members of the committee go out and prepare the add-ons that they want for the budget. Everybody knows the $18.3 billion is less than they need, less than they want. They said, we will live with it.

Now, what happens? You can talk about the President's tax cut all you want. It is the right thing, but what really happened is, that economic estimate that you are operating on went down, through no fault of the military, through no fault of anyone, as I just said. That means that the surplus went down. That means that today we are telling you, after you have gone to the trouble of making this fit a 4-month-old budget, and try to build into it continuity, we are going to ask you to cut it because somebody is saying the economics have changed.

So I would ask the members here, and I would ask the Congress, do you really want to treat the military as a roller coaster, depending upon what the economists say the state of growth of the American economy is? I do not believe so. I think what they need, they need, and we ought to give it to them. This economy is going to come back. Do we want them to be anxiously awaiting for an economic recovery so that they will have money to fund their budgets? I think that is ludicrous.

What we have to do is, fit in an honest budget that was changed by economic downturns. That would be a terrible mistake to send them back and say, do it over again, for what reason? Because the economy faltered somewhat, but it will be back in a year, 2 years, and then what do they do, try to build back and make harmony out of confusion. That is my assessment.

SAFETY AND RELIABILITY OF U.S. NUCLEAR STOCKPILE

Now, let me say to both you and the General, I am very worried about the way the military and the Defense Department treats nuclear weapons activities. Our good friend from California raised the issue, are we going to do nuclear testing. Senator, we are not going to do nuclear testing provided we get sufficient money to keep that part of the United States research effort in defense nuclear security, headed by General Gordon, so we can have enough money to do the research to do what, to tell Congress and the President that the weapons are safe and secure. That is called science-based stockpile stewardship.

Now, whenever the military gets tight, they put more in the regular defense and less for nuclear weapons. I submit that the nuclear weapons compound of America, including the three national laboratories, including a big laboratory in Tennessee, are in desperate state of repairs. You did not put any money in for this, in this $18.3 billion for that, and we must begin to have you worry about that just like you worry about tanks, or readiness. General Gordon has reached the end of the rope in trying to put together his new semiautonomous agency that will protect us in the science-based stockpile stewardship.

I do not expect an answer, other than, Mr. Secretary, are you aware of this problem?

Secretary RUMSFELD. Senator, I am very aware of the problem. I have had at least three or four meetings with General Gordon. I have worked with OMB and the President on General Gordon's

budget. As you know, his budget is in the Department of Energy and not in the Department of Defense.

Senator DOMENICI. That is true.

Secretary RUMSFELD. But you are absolutely right, the worst nightmare would be to receive a phone call and say, Secretary of Defense Rumsfeld, I am very sorry to report, but the nuclear stockpile, we have just been examining it and reviewing it, and it simply is not safe or reliable, some element of it, and we need to make the kinds of investments you are talking about to assure that we do not have that situation.

Senator DOMENICI. Mr. Chairman, might I ask if the Secretary will be a little more involved right now? They are cutting next year's more than this year's. Right now, your budget does not cover any reconstruction of these buildings, including the dilapidated one in Tennessee, where the ceiling is falling in on the workers so they have to wear helmets, even in service-type jobs. You put no money in for that. This committee did. You put none in. It is a very serious problem, and I hope you will look at it.

Senator INOUYE. Your time has expired. Senator Kohl.

Senator KOHL. Thank you, Mr. Chairman.

Secretary Rumsfeld, getting back to nuclear missile defense, which theoretically would make us invulnerable to the rogue State's missile, what about chemical weapons? What about biological weapons? Are we invulnerable to that, and if we cannot address that satisfactorily, then why are we addressing this as if to suggest that this protects us against rogue States?

Is it not true that during the gulf war, that Saddam Hussein, had he wished, could have released biological warfare against us, and that he did not because he recognized that we would destroy his country in an instant, so unless we can deal with nuclear, with chemical and biological weapons, how are we offering the American people any sense of protection by dealing with this missile shield defense?

WEAPONS OF MASS DESTRUCTION

Secretary RUMSFELD. Senator, you are quite right, if one looks at the world, the number of countries that have active nuclear programs and/or active chemical programs, weaponized, and active biological programs that they weaponize, is growing. All three are serious. All three are considered weapons of mass destruction, and terror weapons. They can be delivered in a variety of ways. They can be delivered on ballistic missiles, they could be delivered on cruise missiles, they could be delivered by terrorists.

So to the extent countries that want to impose their will on their neighbors know that they really cannot compete with the western armies and navies and air forces, they not surprisingly look for terror weapons, and terrorism, and the use of weapons of mass destruction, and a variety of means of delivering them.

We are spending, I think, something like $10 or $11 billion to deal with terrorism, Government-wide and force protection. We have funds in our budget to address subjects like chemical and biological weapons. They are very serious, and very worrisome.

However, to go then to the next step and say, well, if we cannot defend against everything, why should we defend against anything,

is really a leap in logic that I cannot make. The advantage of a terrorist is, they can attack at any time at any place, suing any technique, and it is not possible to defend in every time, in every place, against every technique, but simply because we cannot defend against everything at every time in every technique, does not mean we should not defend against that which we can defend against, and that is why we are investing the money we are for antiterrorism, it is why we are proposing money for missile defense, it is why we are investing money for cruise missile defense.

Senator KOHL. But would you not agree that developing a missile defense system to render ourselves invulnerable encourages other countries to then develop chemical and biological weapons to make themselves effective in defending themselves against us?

Secretary RUMSFELD. I think the history of mankind——

Senator KOHL. And I have to ask this question.

Secretary RUMSFELD. Yes, sir.

Senator KOHL. Why would we then deny other countries the right to defend themselves with chemical and biological weapons if they cannot afford and do not have our missile defense system? Why would not they then argue, if you are going to develop a missile defense system, and we cannot prevent you, or you will not allow us to prevent you, then you must also allow us to develop our own system of chemical biological weapons, and do not tell us we cannot have them?

RATIONALE FOR MISSILE DEFENSE

Secretary RUMSFELD. Senator, first let me say that there is no missile defense system that is going to make us invulnerable in terms of, there is no weapons system, defensive or offensive either one, that has ever been perfect, that has ever worked 100 percent of the time. That is just not in the cards.

Second, the whole history of mankind has been that because there are people who want to impose their will on their neighbors and deny them freedom, and occupy their lands, that we have seen an offense and then a defense, and a new offense and a new defense, and a new capability, so it has always been evolving and changing.

It would not really matter whether the United States told these countries they should not have chemical or biological weapons. We have told them not to, and they still go right ahead and do it. They have them. They exist. There are countries that have weaponized those weapons in a way that they can today impose enormous damage on their neighbors and on others.

Senator KOHL. So then, why missile defense?

Secretary RUMSFELD. The advantage of missile defense is the same thing as the advantage in looking at force protection for your forces in the Middle East, for example. One might say, gee, U.S.S. *Cole* was just hit. Why do we worry about that? Well, we worry about it because we would prefer to be able to take the U.S.S. *Cole* and steam it in the Persian Gulf and not have it blown up by a terrorist.

We lost, I do not remember the exact number, but in Dharain in the gulf war 19 to 23 were dead, and some 60, 80, 90, 100 were wounded, Americans, by a ballistic missile fired by Saddam Hus-

sein, and anyone who has lived in Israel and seen the ballistic missiles come raining down on them ought to have a good sense of why it is that people do not like to have ballistic missiles raining down on them, and would prefer to have a defensive capability to defend them.

Senator KOHL. I hear you, and you know a lot more about this than I do, and you are a smarter man than I am, but I do not understand it. It is to me an effort to make this country invulnerable in that respect, but totally not taking into account that any country wanting to respond to us can just go beyond or go around missiles and deal with mass warfare in other ways, and until you can address, or until we can address these other ways, it seems to me it does not make sense to start moving down this path, as long as there are other paths that other countries can use, a lot cheaper and just as effectively.

If the goal is to kill several million people, which a missile would do, they could do it with biological and chemical weapons and ensure their disruption as quickly from our country, just as would be the case if they rained a missile down on us, so unless, it seems to me, we can proceed in all three ways in a convincing manner, it does not make any sense to go down just one road.

Senator INOUYE. Thank you very much. Senator Cochran.

Senator COCHRAN. Mr. Chairman, I think I will take just a few seconds to say that my impression is that in the Department of Defense budget there are requests for funding of other programs that deal with the biological threat and that deal with other terrorist activity. Is that not correct?

Secretary RUMSFELD. Absolutely correct.

Senator COCHRAN. And are we not trying our best to marshall all the technologies and the best, scientific minds we have available to us to come up with the answers to the challenges posed by these other kinds of threats?

Secretary RUMSFELD. We have, indeed, invested a good deal over the years. For some reason, missile defense has become almost theological, and separated out from the others. While I tend to deal with them all across the spectrum, as Senator Kohl suggested, from terrorism to cruise missiles to ballistic missiles, and any of the asymmetrical methods that one can use to get around a country that has powerful armies, navies, and air forces.

Senator COCHRAN. It may be helpful, actually, for our debate when this comes up on the floor, to have a comparison between the amount of money that is being requested, or has been spent, dealing with these other threats that are described by Senator Kohl, and compare that with the investments that we are making in missile defense, technology development and possible deployment of systems. Can we do that? Would that he possible to submit that for the record? Mr. Zakheim—is it something that can be done?

[The information follows:]

DOD SPENDING

No, such a cost breakdown cannot be provided because the Department of Defense does not organize its budget or programs according threats. Ballistic Missile Defense is the only program that comes close to doing such a thing. But even there, DOD spending to protect the United States and its forces against missile attack entails more that BMD accounts. For broader threats—like terrorism or attacks on our

DOD information systems—the fact is that the bulk of our defense spending gives us the forces, capabilities, infrastructure, intelligence, and more, to counter these and other threats. Yes, we have specific programs—like Chemical and Biological Defense—that would seem to define DOD spending to counter a certain threat. But even in these cases, DOD has other spending that contributes as well. DOD has not invested the time or money to aggregate total costs per type of threat because that simply is not how we plan, program and budget. We assess full panoply of threats and design a complex of capabilities to counter these threats.

NAVY SHIPBUILDING

Senator COCHRAN. Let me go back to the shipbuilding. I am glad to hear the Secretary say that this is a major concern of his as well. One thing that happened earlier this year that was a jolt was that there was a delay in the selection of the DD–21 program. It was scheduled for May. It has now been postponed so that the quadrennial defense review can be completed.

Then there was some concern, even though in June the testimony from the Commander of Naval Operations (CNO), Admiral Clark, and the Commandant of the Marine Corps, General Jones, indicated that this program provided very important new technological advances, modernizing war-fighting capability, force projection, with support from naval forces that would be very, very important in the years ahead, and then there was a news conference by somebody at the QDR, a former Air Force General, talking about how they were not certain at this point that there was sufficient evidence that the DD–21 program would be a truly innovative advancement in Navy war-fighting capability.

So it leaves one with the concern that the Department of Defense has publicly described differences of opinions between very high-ranking officials and people who are given responsibilities for helping make these decisions.

So what I am saying this for is to put an emphasis on the importance of this program to the future of shipbuilding, for the future of our Navy's capabilities to fight the wars of the future, and if we abandon this effort at this time, it is going to deal a death blow to not only the industrial base, but also the capability of the Navy to deal with the challenges of the future in a way that would avoid risk and make us more efficient in our effort to discharge our defense responsibilities.

Secretary RUMSFELD. Well, Senator, I can say two things. One is, no decision has been made that I know of on the DD–21, and I think I would know. It is something that the Navy is considering in their priorities, and then it will be brought up in the budget cycle.

Second, the fact that there are repeated news articles where someone in the Pentagon or someone outside the Pentagon in the contracting community, or someone in the Congress who has an interest in the subject opines on this or opines on that is something that is part of our free press and First Amendment to the Constitution.

There is nothing we can do about it. It happens, and I know it can be disorienting and confusing, because frequently the articles are written in a way, as though they sound authoritative, as though something has been decided, and in fact what generally is the case is exactly what you said, somebody comments on some-

thing and says that is their view, and it may be a person who works in the building, or it may be a person who works outside the building.

CONTRIBUTIONS OF GUARD AND RESERVE

Senator COCHRAN. One of the recent experiences I had back in my State, I was visiting Camp Shelby, which is a National Guard training facility. They had created there a training program for soldiers and guardsmen who were going to be going to Bosnia to participate in peacekeeping operations there. I think it indicates the importance of our training for Reserve and Guard personnel, that they are being brought into the mix now of some real live experiences that are important to our Nation's security and also our commitments that we have around the world.

In addition, C–17's are being stationed down in Jackson at the Air National Guard facility that we have in Mississippi, the first National Guard unit that will be given the C–17's; we had a celebration event the other day in that city. The State welcomes the opportunity to be involved.

In many cases the Air Force Reserve personnel are asked to volunteer for missions, to provide airlift, and support for troops in the field, as they did in Desert Shield and Desert Storm and other conflicts as well, and now are taking part in training exercises so they will be able to add and supplement the Air Force capability in this area.

I am just curious, General Shelton, if so far the activities of the Guard and Reserve personnel are proving to be confidence well-placed, are they doing their jobs, and are they being trained so that when they are sent out here into the field to do these missions, they can take care of themselves, they can do their jobs, and come home safely?

General SHELTON. Senator Cochran, first of all I do not think there is any question that the tremendous value-added that our great Guard and Reserve units are in fact—you might say their motto would be, try fighting without us, because when you look at our—and you mentioned the tanker fleet as an example during Allied Force, a tremendous number of our reservists, and if you look at the Balkans, we are involved in that particular operation, airlift as well, and do a superb job.

If you look in the Balkans on any given day, we will have a 25 percent to 30 percent of our force in the Balkans will be from Reserve or Guard units, and they have done a great job, and I believe that we have gone to great extents in recent years to make sure that they are funded properly so that they can be trained, they can be ready for the mission that we assign them.

The vignette type training that you saw at Camp Shelby, which is great training for those that are deploying into Bosnia, is just one example, I think, of a myriad of types of programs we have to make sure that when they are called, that we have them properly prepared before they are deployed into the theater of operation, but again they make a tremendous contribution day-in and day-out, and a lot of our specialties are predominantly in the Guard and the Reserve.

If you look at the Guard and the Reserve, 96 percent of our civil affairs capabilities, which are in heavy use in most of the types of operations we are involved in today, are in the Reserve components, and it varies by type of specialty, but my biggest concern today, and part of what we are looking at as a part of the study that the Secretary mentioned, is how much more could they absorb, or do we have them overtaxed?

Certainly, as we look at the numbers we are calling up, and the frequency, that is our major concern today, is to make sure we have got the balance right in the various types of units.

Senator INOUYE. Thank you very much. Senator Feinstein.

Senator FEINSTEIN. Thanks very much, Mr. Chairman.

General Shelton, I do want to say congratulations. I want to wish you well on everything you do, and I want to say one more thing. I remember well, and will remember you for your classified briefings during military engagements. Unlike some, you were always direct. You were to the point. Your briefings were easily understandable. They were well-ordered, and I think your team was excellent.

And from those briefings, it really gave me a great deal of faith in our military, and I think it is really your contribution, and I think one of the reasons that we had, really, no opposition to what was happening was the way you relayed it to us. So I want to say congratulations, and this Senator will miss you very much.

General SHELTON. Well, thank you very much, Senator, and let me say quickly that as you said, I was supported by a great team and was proud to be a part of it.

Senator FEINSTEIN. Yes, you really were.

General SHELTON. Thank you.

Senator FEINSTEIN. Thank you. Now, you mentioned that 62 percent of the housing is substandard. I am glad Senator Hutchison is present. She is Ranking and I am chairman of Milcon, and I am going to look at the budget tomorrow. It would be very useful if I could have before tomorrow your priorities with respect to those requests that you believe are most important to upgrade the housing. I think it is extraordinarily important.

I have talked to General Meigs about his need to move a division south of the Alps. I understand that. I talked to Admiral Blair about some of his concerns, and I think Senator Hutchison would appreciate it, too, if we could have some of your priorities.

I have talked to the chairman of the House committee, and he feels similarly about doing what we can to upgrade the housing, so I think that will be the thrust of this Milcon budget, and we would love to have your priorities.

Mr. Secretary, you mentioned additional base closures. I want to just share one thing with you. The environmental remediation dollars provided with base closure are remarkably short. California alone could use the entire Nation's total. The shortness of those dollars is truly responsible for why some of these bases cannot be transitioned into civilian use, and so in California, the process has really been stymied because of that. I will not use more of my time, but it is a real problem out there, and want you to know it.

SOURCE OF DEFENSE BUDGET INCREASE

The other thing is, there are many of us that feel that the administration has an obligation to say where the $18 billion additional in the defense budget should come from, and what the administration's recommendation is with respect to what items we cut to provide that money. I would hope we would have a recommendation.

Secretary RUMSFELD. If you are referring to the total Federal budget, and where the money for defense should come from——

Senator FEINSTEIN. That is correct.

Secretary RUMSFELD. The President's answer is, he has repeated several times in the last month, is that his priority is defense and education, and that that is the place that he believes the Congress should put their priorities.

Senator FEINSTEIN. But he has also said he does not want it coming from social security, he does not want it coming from the Medicare trust fund, ergo, it has to come from something else that is cut, and all I am saying——

Secretary RUMSFELD. Or not increased.

Senator FEINSTEIN. All I am saying is, what are his recommendations? I think this is his budget, I think he has an obligation to tell us, then, what he would cut, so in any event, that is that.

MISSILE DEFENSE DEPLOYMENT

Now, let me go back to missile defense. The New York Times on its web site had an article, and there are two articles in the Washington Post under the byline of Michael Allen on the subject of perhaps some games being played around the issues that we discussed earlier. If you have not seen them, I will make them available to you. I would like to know whether these are totally false, essentially, and I will do that in writing.

Secretary RUMSFELD. I would be happy to take a look at it. One thing I do want to comment on is, in your earlier comments at the opening of the session, you said that you were concerned that ballistic missile defense deployment would go forward untested, and I would not to—I think that is roughly what you said. I want to assure you that we are not deploying ballistic missile defenses. We are engaged in a research and development and testing phase of ballistic missile defense, and we have not arrived at an architecture, because these tests have never been done.

Second, with respect to going forward with something untested, there is no question but that the goal would be to complete the testing and then make a decision as to the architecture, and then make a deployment decision. The reality about most things is, most complicated technological things, is that they evolve over time, and they are continuously changing.

I mean, the F–16's of today are not the original F–16's. The M–1 tank is not the original M–1 tank. It has got the same number, but a new model, new block number, and that would be the case, and the suggestion that has appeared in the press that the intention of the administration is to rush out with something that has not been tested is simply not correct.

Senator INOUYE. I am sorry, the time has expired.

Senator FEINSTEIN. Oh. I would like to then ask in writing a follow-up on this, if I may. Thank you.

Senator INOUYE. Senator Specter.

Senator SPECTER. Thank you, Mr. Chairman. Mr. Secretary, you can see at this session the considerable concern from the subcommittee on the issue of missile defense and all of its ramifications. When we were debating the broad versus the narrow interpretation of the ABM Treaty back in the mid-eighties, there was some thought that there might be some defenses allowed to the Soviets. At that time it was considered too expensive, too complicated, and too unworkable to have the massive defense program, so it was restructured to a considerable degree on the potential threat from North Korea.

There have been some signs in recent months that we may be able to deal with North Korea. I want to cover just two questions with you in the brief time allotted to me. If, in fact, there is some opportunity to negotiate with North Korea, and to be satisfied that there is a verifiable system in effect, would there be concerns about the other so-called rogue nations—Iraq, Iran, Libya, or any other state—to cause the development of a missile defense system?

And the second question—let me put it on the table before the time expires—is the issue that I raised in my brief opening comment with respect to abrogation of the ABM Treaty, if it comes to that. There is a long history in many instances where the executive branch has come to Congress, which of course has the responsibility to ratify treaties with a two-thirds vote for congressional joinder in abrogating treaties. That was changed, as I noted earlier, by President Carter in 1978. A large group of Senators, Goldwater, Helms, Thurmond, Hatch, and others, joined with the position that it required congressional assent to terminate a treaty.

I would like to have your comments on those two questions.

SO-CALLED ROGUE NATIONS

Secretary RUMSFELD. Well, Senator, with respect to the first question the answer is yes, there are a number of other countries that are sufficiently worrisome that have been active in developing ballistic missile technologies and weapons of mass destruction, and you named some of them.

One of the interesting things about life, if you think back to Iran under the Shah, within a year the Shah was gone, and the Shah had been a regional power, very friendly to the United States. Within a year, it was the Ayatollah, a total change in that country.

When the Senate confirmed Dick Cheney for Secretary of Defense some 10 years ago, no one in the room raised the word Iraq, and within a year, we were at war with Iraq.

If we know anything from history, it is that we cannot predict the future. The nature of our world is that there is so much proliferation of these technologies that we cannot know from exactly what country or at what moment a threat will come. What we can know is that those technologies are proliferating.

Therefore our strategies are looking more at threat-based strategies, which is historically normal in the near-term, but in the mid to far term, you are forced to look at capabilities-based strategies,

and look at the kind of capabilities that exist in the world that are going to pose a threat to the United States.

So the answer to that question is, absolutely, there are any number of countries that we can see that are worrisome, and there are any number, like in the case of Iraq and Iran, that can shift in a matter of a few months.

With respect to the treaty, I am not an attorney, and I think I will leave that question for the Department of Justice.

ABM TREATY

Senator SPECTER. Well, that is something that is going to come before you, Mr. Secretary, because you are asking for very substantial appropriations on missile defense. The ABM Treaty is an integral part, and I can understand the legalisms involved, but there is a question of public policy in dealing with this committee, in dealing with Congress. Would you not suggest a position on it?

Secretary RUMSFELD. Well, I will certainly say this. The President has announced that his goal is to find an approach with Russia where the treaty will be mutually agreed to no longer inhibit the kinds of missile defenses which the President has announced he believes are in the best interests of the United States, and if he is able to achieve that kind of an understanding and either set aside the treaty or move beyond it with a new framework arrangement between the United States and Russia, that would be his first choice.

Senator SPECTER. I see my red light is on, but of course I have a very brief concluding comment. If there is an agreement, then you will have the automatic concurrence of the Congress. I think this is really not a legal issue for the Department of Justice, Mr. Secretary. I think it is a public policy issue which is going to involve the Department of Defense and the Department of State.

Thank you very much.

Senator INOUYE. I thank you, sir. Mrs. Hutchison.

Senator HUTCHISON. Thank you, Mr. Chairman.

Mr. Secretary, I wrote you very early in the year to say that I have visited a number of our bases overseas, and at the time you were also talking about the need to lessen the number of bases in America, and I thought it was very important before we took any action lowering the number of bases in our country, that we know what our future force strength would be, what would be the numbers, what would be the numbers based in America for training purposes, what would be the numbers based overseas. I asked you to consider doing an assessment of our overseas deployments and report back.

The letter that I received back said that the Chairman of the Joint Chiefs would be providing a master-basing concept after the QDR results came in. I wanted to ask you what your impression is at this point, if you have an idea of what we would be looking at, when you think the QDR and then the master-basing concept would be able to be brought forward, and if you would suggest that we do any base closures in America before we know what our troop strength and our strategy and our QDR results will be?

QDR AND FORCE STRUCTURE

Secretary RUMSFELD. Senator, the QDR is going to be concluded September 30. There will be some pieces of it, as I mentioned, like National Guard and Reserves, which will follow on, but the force decisions for the United States are going to be made in the 2003 budget cycle, which is, as I say, September, October, November, so that the President can present his 2003 budget.

Dr. Zakheim is going to Europe, I believe next week, to look at the European base structure situation, and you are quite right, we clearly need to have a good understanding of what our force structure is to be for the period ahead. We have to know with respect to that force structure which portions of it are likely to be based outside the continental limits of the United States, and then we have to review the base structures to see to what extent it fits that, and that is the process we are going through.

Senator HUTCHISON. One of the things that struck me as I was visiting some of our bases overseas is the training constraints in some of those bases, whether air space constraints or constraints on missile ranges on the ground. Will that be a factor also in how you decide where the best training would be for our troops?

Secretary RUMSFELD. It clearly would have to be, yes, ma'am.

Senator HUTCHISON. General Shelton, did you have anything to add to what the master base concept would be and when it would be available?

General SHELTON. It will take a while, Senator Hutchison. I do not have a time on that right now. A lot of that would be driven, of course, the magnitude of it, depending on what the decisions are that came out of the QDR, but certainly the capabilities with each of the bases would be something that would have to be considered, and that is becoming, as you indicated, in some areas more and more of a challenge for us not only overseas, but here in the continental United States as well.

Senator HUTCHISON. I think if you put that issue on the table together with the fact that we have closed some bases in our country which we then, 2 years later, determined that we actually needed, and with the astronomical cost mentioned by Senator Feinstein of the environmental cleanup, I would just hope that all of that would be a part of the equation before we go into making final decisions that could be more costly if we have to reverse them or try to seek another base because we have closed one that we actually needed.

The second question that I would ask you, General Shelton, is regarding a piece of legislation that Senator Inouye and I and Senator Stevens have introduced that allows anyone in DOD who dies in the line of duty to be fully vested in the retirement system. Today, you have to have 20 years before you get fully vested in your retirement, and yet people can be killed even in combat—and in training situations before the 20 years and not receive their full vesting of retirement benefits for their families, so I just ask you if you do think that it is important that we pass that legislation, and will it have a big impact on the military budget if we do?

General SHELTON. Senator Hutchison, from my standpoint it certainly would be the right thing to do. As we have talked a lot about here today, in tight times where we have, as the Secretary and I

have indicated, in many places metal on metal contact, so to speak, in terms of the requirements versus the amount of funding available to carry them out, anything that adds an increase to the service budgets that is not currently projected causes great concern on their part.

Without knowing what the magnitude—I have not seen any studies that show what it will be. Certainly, from my best military advice, it is the right thing to do for our people. Again, we would have to be careful that we look at the amount of funding required and identify a source for that funding before we implement it, but again, I would recommend that we proceed in that manner, and I fully support the legislation that would provide it for our servicemen and women.

Senator HUTCHISON. Well, I think the number of training accidents that we have is fortunately very few, and we know we will keep it that way, so I would think it would have a minimal impact, but it certainly is the right thing to do. We appreciate your support.

Thank you, Mr. Chairman.

Senator INOUYE. I thank you very much, Senator.

ADDITIONAL COMMITTEE QUESTIONS

Mr. Secretary, General Shelton, on behalf of the committee I thank you very much for your presence here today. Your comments and your responses to our questions have been most helpful.

I am certain from the questioning and comments you have gathered the concern about the challenge before us, balancing of defense needs and the budget situation, so I hope that we can continue to work together to come forth with a solution that all of us can agree upon.

And once again, General Shelton, I must say that we are most grateful to you for the service you have rendered to the people of the United States over the years. You have made your career one that all of us could be very proud of, and we thank you very much, sir.

General SHELTON. Thank you very much, Mr. Chairman.

Senator INOUYE. We wish you much success and happiness as you retire from this career.

[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. DONALD H. RUMSFELD

QUESTIONS SUBMITTED BY SENATOR TOM HARKIN

IOWA ARMY AMMUNITION PLANT (IAAP)

Question. Secretary Rumsfeld, can you tell the workers at IAAP today that they can talk about exposures at the plant with their doctors, with environmental cleanup officials, and with health researchers without violating any secrecy oaths or policies?

Answer, Yes. Neither secrecy oaths nor policies prohibit any citizen from discussing exposures to radioactive and hazardous materials with their healthcare professionals or other appropriate officials. Individuals bound by secrecy oaths at former defense nuclear weapons facilities, therefore, may respond to questions regarding possible exposures at the plant provided they do not reveal classified information.

Question. The workers on the Army side of IAAP were exposed to many of the same toxic high explosives and radioactive materials as those on the AEC side of the plant, sometimes worked in the same buildings and areas, and were employed by the same contractor. Do you think they deserve the same treatment?

Answer. I do, which is why I have authorized the development of a plan to identify, notify and provide security guidance to former and current personnel who worked at former Department of Defense nuclear weapons facilities that they may discuss possible exposures to radioactive or hazardous substances associated with nuclear weapons with health care providers and other appropriate officials, as long as they do not reveal classified information.

Question. Currently the locations of former nuclear weapons storage sites within the United States are unclassified, but are still covered by the so-called "neither confirm nor deny" policy. When Army officials can't say the word "nuclear" in connection with a plant that everyone knows was a nuclear weapons facility, it sends the wrong signal to former workers who are afraid to talk about it. Now, I don't see why the function of a plant that closed in 1975 would be a security risk, so why can't you talk about it?

Answer. Security classification is not the issue regarding the activities at the Iowa Army Ammunition Plant (IAAP). Classification has no direct bearing on a response to a question regarding the presence, or absence, of nuclear weapons. As long as there are, however, classified locations of nuclear weapons, official spokespersons for the U.S. government are prohibited from confirming or denying the presence of nuclear weapons at any general or specific location. The basis for this requirement 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 threats of sabotage and terrorism. This is a policy that acts to protect individuals from inadvertently revealing classified weapon locations stemming from a series of media queries and responses to them. In response to public affairs questions concerning the general or specific location of nuclear weapons, the response—Neither Confirm Nor Deny (NCND)—will always be given, even when the location is thought to be known or obvious.

Question. Do you think it makes the government look foolish when the Energy Department says a plant assembled nuclear weapons, but the Defense Department won't admit the weapons were there?

Answer. Former nuclear weapons sites within the United States are unclassified. However, it is the policy of the U.S. Government to neither confirm nor deny the presence or absence of nuclear weapons at any location independent of the classification. The basis for the security requirement inherent in the U.S. policy of neither confirming nor denying the presence or absence of nuclear weapons is to deny military 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 threats of sabotage and terrorism.

Question. A document recently released by the Pentagon stated that the United States had nuclear weapons in Alaska, Cuba, Guam, Hawaii, the Johnston Islands, Midway, Puerto Rico, the United Kingdom, and West Germany. After the document was released, a Department spokesman said on television that the United States never had nuclear weapons in Iceland. Why can the Pentagon talk about nuclear weapons in Alaska and Iceland but not in Iowa?

Answer. In response to public affairs question about the general or specific location of nuclear weapons, the response, neither confirm nor deny, will be given even when such location is thought to be known or obvious. The purpose is to deny militarily useful information to potential or actual enemies, to enhance the effectiveness of nuclear deterrence, and contribute to the security of the weapons. Documents released through the Freedom of Information Act (FOIA), 5 U.S.C., § 552, follow the classification procedures established under EO 12958, Classified National Security Information, 17 April 1995, and the security guidance mandated for Formerly Restricted Data.

Question. In 1999 the Army asked for former nuclear weapons storage sites to be excluded from the "neither confirm nor deny" policy for similar reasons, but the request was denied. Army officials have told me this is still a problem for them. Will you reconsider that request?

Answer. It is my understanding that the Army is no longer pursuing such an exception.

Question. In my letter to you I requested a timeline for implementing the amendment. I still have not received that. Please provide a timeline for the review of security policies, for the notification of workers, and for the report to Congress.

Answer. The policy, procedures and implementing guidance for a program to comply with section 1078 of the Floyd D. Spence National Defense Authorization Act

for Fiscal Year 2001 will take time to develop and sufficient funds to implement. As a comparison, the Nuclear Test Personnel Review (NTPR), which is a program to identify military personnel who participated in our atmospheric nuclear test program, has cost $225 million to execute to date and has been in progress nearly twenty-four years. As soon as the Department of Defense has a plan and the estimated resources to complete it, you, as well as the appropriate congressional committees, will be notified.

Question. The letter from Mr. Verga hints that it may be difficult to find all the former workers who are supposed to be notified under the amendment. But we do know the workers at the Iowa plant and have records for them. Will you ensure that these Iowa workers are notified quickly while efforts continue to identify other covered workers?

Answer. It is my intent to comply with the law and we appreciate any assistance that you can provide regarding the records of the Iowa workers. I intend to work the problem in a comprehensive manner with a realistic plan of action. In the spirit of fairness I think that it would be improper to single out Iowa workers for quick notification since the law requires me to notify all other workers who were, or are, engaged in activities as defined in section 1078.

MEETING THREATS TO U.S. NATIONAL SECURITY

Question. Today you emphasized that spending on national missile defense is a small percentage of the total Defense Department budget and that ballistic missiles are just one of several threats to our security. Could you provide the funding level in the Defense Department fiscal year 2001 budget and in the fiscal year 2002 proposed budget that is allocated for defense of U.S. territory against each of the following weapons of mass destruction and possible delivery systems?

—Ballistic missiles
—Cruise missiles
—WMD smuggled into the U.S. ("suitcase bomb")
—WMD made in the U.S. by terrorists
—Conventional attack on a U.S. nuclear plant or chemical plant
—Biological weapons
—Chemical weapons
—Nuclear weapons

Answer. With the exception primarily of missile defense, Department of Defense spending does not have funding categories for specific threats. The entire DOD budget is geared to deterring and defending against all categories of threats, such as those cited in your question. America's military presence and ability to respond in any major global region is the foundation of our protection of U.S. territory and U.S. interests overseas.

A specific example: Our global naval presence and dominance serves as our primary protection against cruise missiles launch or other weapons launched from hostile ships. Our DOD capability is also supported by Coast Guard capabilities. But as this example shows, one cannot take the total Coast Guard budget, plus our total Navy budget, and say that that is what we spend to defend against cruise missiles. That spending is to counter all threats to the United States and its interests, not just cruise missiles.

In sum, total DOD spending aims to deter and defend against all weapons (nuclear, chemical, biological, and conventional) and all means of delivery (long-range ballistic missiles, cruise missiles, aircraft, naval vessels, etc.) There are no subcategories for each type of weapon or each means of delivery.

The one subcategory that does exist and has meaning is Ballistic Missile Defense, which seeks to defend the U.S. homeland against ballistic missiles carrying any category of weapon (nuclear, chemical, biological, or conventional). For BMD, the fiscal year 2002 budget request was $8.3 billion, and the fiscal year 2001 budget was $5.4 billion.

For threats within American borders (WMD smuggled into the United States, WMD made in United States by terrorist, and conventional attack on American nuclear plants or chemical plants), virtually all of our nation's protection against these threats is provided by non-DOD entities: private security arrangements to protect non-government facilities, state and local police, and the FBI and other federal agencies. DOD spending does cover protection of its facilities against terrorist threats, but again there is no meaningful spending subcategory. DOD spending for police and security at its facilities does go solely or even largely for protection against terrorist attacks; such spending goes also for traffic control, crime prevention, etc.

QUESTIONS SUBMITTED BY SENATOR RICHARD J. DURBIN

ROCK ISLAND ARSENAL

Question. I would like to take this opportunity to tell you of my strong support for the Army Arsenals, the Rock Island Arsenal in particular. The Arsenals play a very important role in protecting our defense industrial base, yet have languished in a "Catch-22" situation of having to cover costs of extra capacity that is being held in reserve in case of war. I would welcome your support for the role of the arsenals.

Recent efforts by the Army Materiel Command to urge Army program managers to use the capabilities at the arsenals has resulted in the first significant hire of workers at the Rock Island Arsenal in over a decade. This policy helps arsenals maintain the skills and capabilities needed to meet national mission requirements. It also largely does not affect private industry because it taps the arsenals for work that is mostly specialized and not done easily by private manufacturers. Can we count on you to continue this policy?

Answer. We will continue this policy. In October 1999, the Army issued written guidance that clarified longstanding policy requiring all Army acquisition organizations, including program managers, to give preferential cost treatment to Army arsenals and factories when making source selections for direct sources of supply. This policy follows generally the Comptroller General's consistent interpretations of the Army Arsenal Act. Subsequently, in February 2000, the Secretary of the Army initiated a review of mission needs that drive retention of industrial reserve capacity with a particular focus on meeting those needs without distorting the economics of program acquisition decisions. RAND has been asked to recommend alternatives for the Army. This should lead to a comprehensive arsenal and ammunition plant strategy.

155 MM HOWITZER PROGRAM

Question. I am troubled by the significant problems in the 155 mm Lightweight Howitzer program. Two successive GAO reports show continuing and growing problems that raise serious questions about whether this system will ever be built. We now have a gun that may always have cracks in important titanium components and that may be impossible to accurately aim. I am also concerned that the design flaws will make the Howitzer very difficult to manufacture. This is a vital capability that many of our young soldiers will have to stake their lives on. Have you looked at this program? Have you considered terminating the program and re-competing it?

Answer. The Lightweight 155 mm Towed Howitzer (LW155) will provide a lightweight, highly mobile and deployable fire support system to our expeditionary forces and brigade combat teams. The Marine Corps has made a significant investment in this program and the issues identified by the GAO have been addressed in the current design of the weapon.

Initial contractor testing on the first weapon (August 2000) revealed one minor crack in the spade. The crack was repaired in the field and the weapon continued firing without recurrence. Subsequently, the spade design was strengthened and there have been no additional issues with regards to cracking in the spade or elsewhere on the weapon.

Accuracy of the weapon remains a risk area, however there have been significant improvements made during development by stiffening the structure, tightening tolerances, improving the fire control linkage and insulating key components from thermal effects. The adequacies of these improvements are being assessed as part of the ongoing developmental testing.

BAE SYSTEMS has already delivered five weapons. Three additional weapons will be delivered by year-end, and they have selected their U.S. partners to produce more than 70 percent of the LW155 in the United States. They have resolved the initial issues with weld distortion and have introduced castings to improve manufacturability and reduce cost. To mitigate the risk associated with transitioning production from the United Kingdom to the United States, the current contract with BAE SYSTEMS was modified to incorporate the manufacture of two pilot production weapons using the selected U.S. production partners. The Pilot Production effort will provide additional data to demonstrate readiness for production.

While it is fair to say that this program has had some difficulties, issues of this nature are not uncommon for programs at this stage of development. It is in the best interest of the Marine Corps and the Army to assess the results of the ongoing testing to confirm the program's readiness to support a low rate production decision late next year.

FUTURE STRATEGIES AND BASE CLOSURES

Question. Many defense planners say that the United States may have to respond to an "anti-access strategy" by potential enemies which will make it more difficult to maintain our forward bases in certain hot spots around the world, making us rely on long-range systems to project military power. If the United States will have to pull back from some foreign bases to bases in the continental United States, it seems that, in 10 or 15 years, we may need some of the bases some think we could do without today. Did you consider this issue when you recommended another round of base closures?

Answer. Yes, we did. A provision regarding overseas basing considerations, which was included in the Administration's proposal, is also incorporated in the Senate version of pending base closure legislation. That provision requires that the Department consider the anticipated continued need for and availability of military installations worldwide. In evaluating the need for military installations inside the United States, this provision also requires the Department to take into account restrictions on the use of military installations outside the United States and the potential for future prohibitions or restrictions on the use of such military installations.

BALLISTIC MISSILE TESTING AND THE ABM TREATY

Question. Phillip Coyle, former Pentagon Director of Operational Test and Evaluation said there is no reason presented by the current missile defense test schedule that the United States would need to withdraw from the Anti-Ballistic Missile (ABM) Treaty this year specifically, causing you to say that we may need to if no agreement can be reached with Russia?

Answer. The Administration redesigned the missile defense program to a robust research, development and testing program designed to give us deployment options in the 2004 to 2008 period. As a result, the new program requires the ability to do the following: use all available sensors to support missile defense testing; pursue all basing modes (air, sea, mobile-land, and space); share ARM technology with friends and allies, testing without any distinction between shorter and longer-range defense; concurrent testing of ARM and non-ARM components; and finally, no numerical or geographic restrictions on test assets.

The assertion that the ARM Treaty is not currently hindering our test program not is incorrect. On October 25, 2001, we announced that four missile defense test activities planned for this fall are cancelled because they might have violated the ABM Treaty. Three of the test activities involved the use of sea-based radars aboard IJ.S. Navy Aegis ships to track missiles and a Titan II space launch vehicle, while the fourth activity involved the use of a ground-based radar at Vandenberg Air Force Base in California to track a missile during an upcoming missile defense flight test.

Since taking office, the Bush Administration has stressed that we will not violate the ARM Treaty as long as we are a party to the agreement. The President has directed the Defense Department to examine all available technologies and basing modes for missile defense and to construct the most efficient and effective testing program, without respect to the ARM Treaty. As the Administration has said for several months, because we have adopted this approach, our missile defense program would inevitably encounter the constraints of the ARM Treaty, which has now occurred.

RUSSIA'S SECOND STRIKE CAPABILITY AND MISSILE DEFENSE

Question. A panel of scientists released a report in June called, *Toward True Security, A U.S. Nuclear Posture for the Next Decade*, which reported that, on any given day, Russia actually only fields 100 strategic weapons that it can consider safe from a U.S. first strike. Why then, wouldn't even a relatively modest missile defense system be considered by Russia to neutralize their small deterrent capability?

Answer. The success of U.S. policy is not now, nor has it ever been, based on carrying out a nuclear first strike on Russia. U.S. missile defenses will not pose a threat to the Russian strategic deterrent even at drastically reduced levels. The missile defense system we intend to deploy will be capable against a few handfuls of RVs, not a large-scale attack. Furthermore, while Russian strategic nuclear capability may decline to 2,000 weapons over the next decade, it will still be a significant force.

Further, the Cold War is over and Russians are seeking the benefits of democracy. Our foreign policy is designed to encourage Russia's continuing moves towards de-

mocracy and free enterprise as we build an entirely new relationship based on mutual trust, friendship and cooperation.

VIEQUES

Question. I believe it is time, now, for the United States to pull out of Vieques. The handwriting has been on the wall for a long time now that it was time for the Navy to find alternative training arrangements.

What is DOD doing to find alternatives to Vieques?

Answer. The real issue here is effective training for our Sailors and Marines. The Department of the Navy has a study in progress to identify combinations of methods, places, and technologies that could provide the equivalent readiness levels now attained using the range on Vieques. The results are due out in the Spring of 2002 and it is premature to predict the study findings.

A previous study was unable to find a single site alternative to Vieques, and that conclusion, by all indications, remains valid. In addition to the impact area on Vieques, the collocated sea, air, and land maneuver space is valuable to national defense readiness.

QUESTIONS SUBMITTED BY SENATOR HARRY REID

SHORT-TERM AND LONG-TERM NEEDS

Question. The Defense Department needs to address both short-term and long-term needs. These include quality of life, readiness, modernization, transformation, and missile defense. How will priorities be set in light of potential budget shortfalls? In other words, what programs would be most seriously impacted by cuts in the defense budget? Is missile defense sacrosanct?

Answer. My discussions with congressional leaders indicate that they we all share the conviction that we must not shortchange U.S. defense. If shortfalls occur, the most likely programs hurt would be long-term modernization to transform America's armed forces. If cuts were required, no programs should be considered sacrosanct.

F–22 STEALTH FIGHTER

Question. During a visit to the Hill earlier this year, Air Force General David Deptula said the F–22 provides a huge asymmetric fighting advantage for U.S. pilots. What do you see as the role of the F–22 stealth fighter in the force structure? Is it an essential element of defense transformation?

Answer. The F–22 will fulfill a wide and diverse array of roles in the military's force structure. In military operations, the F–22 will provide air superiority to all components of the Joint Force, be instrumental in attacking mobile targets, and be capable of overcoming anti-access threats. The F–22's integration of advanced stealth, supercruise, and fused data avionics make it capable of attacking all types of targets across the width and breadth of any high-threat environment theater. Based on its capabilities, it should come as no surprise that recent press accounts acknowledge that the Secretary of the Air Force plans to make the F–22 the weapon system of choice within the Air Force for hunting and destroying mobile targets. While gaining access through reliance on advanced stealth and supercruise, the F–22's fused avionics will link off-board and on-board sensors with the most lethal, precise, and autonomous munitions in the U.S. arsenal to permit destruction of even the most challenging targets.

The characteristics and capabilities that are distilled into the F–22, basically result in a weapon system that synthesizes what was previously required of many different aircraft. The advanced stealth, supercruise, and fused avionics of the F–22 are all force multipliers that allow a single F–22 to achieve unprecedented operational effects and multiple or numerous F–22s to achieve strategic effects.

The advent of previous stealth fighters into the force structure had a similar strategic effect for the United States. The use of the F–117 stealth fighter in Desert Storm is a prime example. The F–22's stealth capability is a generation ahead of the F–117 and even more advanced than the B–2 guaranteeing the preservation of a key asymmetric advantage of the United States. Open source accounts reveal that the F–22's radar cross section (RCS) is just the size of a marble compared to the F/A–18's beach ball size. This advanced generation of stealth permits the F–22 to operate in threat environments posed by advanced SAMs, like the S–300 series and double-digit types (SA–10, –12, –20) that legacy systems simply cannot survive within in the future.

The F–22 is the only aircraft in the world capable of supercruise—flying supersonic without a gas-guzzling and high infrared source afterburner. Supercruise pro-

vides the F–22 with many force multiplying effects. The ability to fly supersonic and not rely on an afterburner to do so permits the F–22 in effect to increase its high-speed range over legacy fighters since it does not burn up its fuel at as fast a rate. Also, when combined with the F–22's high altitude capability (10,000 feet above most other aircraft) supercruise provides a "booster" effect to air-to-air combat increasing the range of its missiles by 50 percent due to additional velocity. Supercruise permits the F–22 to engage in warfights where it is outnumbered and attack from a position of safety.

The integrated or fused avionics of the F–22 is another unique force multiplying characteristic. The fused avionics of the F–22 allow the routing of all the sensors through a central computer process that will analyze all inputs and present a simplified and accurate picture to the cockpit on an active-matrix liquid crystal display. This will provide a pilot maximum situational awareness and a reduced taskload. Fused avionics also give the F–22 electronic warfare capabilities possessed by the EA–6B and F–16CJ. The F–22's dedicated radar system provides 360 degree coverage in all bands and detect emitters at ranges exceeding 250nm, while its passive system permits the tracking and shooting of multiple aircraft by one undetectable F–22. The "Raptor" will have a "first-look, first-shoot, first-kill" capability on multiple targets. Further improvements in the F–22's fused avionics capability and the adoption of new operation concepts will result in next generation approaches to Suppression of Enemy Air Defenses (SEAD) and Destruction of Enemy Air Defenses (DEAD) along with "hunter-silent killer" attacks against mobile targets using two F–22s and their associated datalinks.

In conclusion, with its unique characteristics the F–22 is the premiere multi-role weapon system of the United States Air Force. It will assume the duties of multiple past legacy platforms and meet them readily, ensuring that the United States asymmetric advantage in aerospace power persists into the 21st century. The F–22's advanced capabilities ensures its place in the future force structure as a "go-to" system to meet the 21st century requirements for destroying targets and assuring air superiority. The F–22 is needed to give the U.S. military the freedom to attack and freedom from attack in high threat environments. As important as its role in the future force structure is the F–22's role in the new defense strategy of the nation.

The 2001 Quadrennial Defense Review (QDR) Report outlined a new defense strategy, built around four defense policy goals: Assuring allies and friends; dissuading future military competition; deterring threats and coercion against U.S. interests; and if deterrence fails, decisively defeating any adversary.

The F–22 while just one weapon system in the nation's national security toolbox supports each one of these pillars of the new defense strategy. The F–22 has capabilities that no other aircraft in the world possesses. Our allies and friends around the globe do not have the will or capability to provide the type of air superiority or target destruction effects that the U.S. military does. The fact is that when needed, American allies rely upon us to provide unmatched air superiority and overwhelming yet precise attack capability from the air. The F–22 assures allies that such reliance on the United States should continue.

The concept of dissuasion is a recent addition to the strategic lexicon of the United States. The QDR acknowledges that the United States can exert influence over the nature of future military competitions and complicate potential adversaries' future military planning in part by maintaining or enhancing advantages in key areas of military capability. In other words, this influence can "dissuade" a future adversary from pursuing a certain military modernization effort. The F–22's unparalleled effectiveness against advanced Surface-to-Air-Missiles (SAMs) and foreign aircraft potentially will assist in dissuading nations from pursuing development and procurement of such systems, particularly if a large number of F–22s are fielded quickly by the United States.

As the public advertisements for the Raptor state, "the first thing it kills is the enemy's appetite for war." This is pure deterrence. The F–22 ensures the United States will go for overmatching not just meeting its future opponents both in the air and on the ground. Knowing this, potential enemies may disengage from threatening U.S. interests, being deterred. However, when not deterred the enemies of the United States will face the prospect of decisive defeat. The F–22's role in being part of imposing that decisive defeat will be great. No matter what the F–22 is contributing whether it be the destruction of advanced SAMs or defense against cruise missiles, to the pursuit and annihilation of mobile targets or protection of joint and coalition forces, it will be needed should deterrence fail.

Not only is the F–22 capable of completing multi-mission roles and being a key tool in implementation of the new defense strategy, but it is also an essential element of defense transformation. The F–22's incorporation into the force structure will permit the eventual retiring of legacy air systems to old to operate in peacetime

and to vulnerable to fly in wartime. The F–22 will be easier to operate. Lastly, through the use of new operational concepts and the innovative integrating of technologies the F–22 will spearhead another transformation of warfare.

The Air Force approach to transformation is one of consistency and completeness. The Air Force defines transformation as fundamental change involving three principal elements and their interactions with one another: Advanced technologies, which, because of the new capability they yield, enable new concepts of operation that produce order-of-magnitude increases in our ability to achieve desired military effects, and organization change that codifies the changes in the previous elements or significantly enhances our ability to execute our national security strategy from the Air Force point of view, military transformation involves much more than the acquisition of new systems.

For this reason, although the F–22 is an essential element in the current defense transformation it is by no means the only element. The F–22 paired with small-diameter bombs capable seeking mobile targets is more transformational than an F–22 armed with current or legacy munitions. The air superiority provided by the F–22 is worthless without future ground combat systems or other air combat systems operating within it. New Intelligence,Surveillance and Reconnaissance (ISR) platforms both manned and unmanned are needed along with new space-based systems. Without new concepts of operations such as the Global Strike Task Force, the F–22's operational role with other systems such as the B–2 and JSF remains undefined.

The F–22 is a key element of the Air Force's continuing transformation. The F–22's advanced capabilities allows the Air Force to replace multiple systems with it, and still fight in different and more effective ways. The F–22 signifies a move away from the one-for-one weapon system replacement approach too often used as procurement strategies. The F–22 will transform the way the Air Force and the United States fights wars. The F–22 as a provider of air superiority will paralyze and neutralize an enemy's air defenses at the outset of war, making follow-on military operations incomparably less risky and more effective. As a strategic strike asset, the F–22 will deliver several precision weapons with high accuracy and low risk across the breadth and width of an enemy territory against time-sensitive targets. Simply stated, the F–22 provides the United States with an asymmetric advantage it cannot forgo.

SIERRA ARMY DEPOT

Question. The Sierra Army Depot, just 55 miles from Reno, was California's leading air polluter during 1999 and poses a significant health threat to northern Nevada. The Army continues to use open burning and detonation to dispose of munitions, which according to the EPA, discharges millions of pounds of toxic chemicals into the air every year. I'm requesting support in this year's defense budget for a project at the Hawthorne Army Depot in Nevada to develop a safe viable alternative to open detonation of munitions. What are the Department's plans to develop safe and environmentally friendly technology to demilitarize large quantities of ammunition/explosives?

Answer. The report implicating Sierra Army Depot as California's leading air polluter in 1999 was a mistake based on incorrect assumptions. The corrected data was resubmitted showing that Sierra was never the leading air polluter. The Department of Defense is committed to developing alternative technologies for the safe, environmentally friendly demilitarization of excess, obsolete, or unserviceable ammunition and explosives and has been engaged in an active research, development, testing, and evaluation program since the early 1990's. Hawthorne Army Depot, for example, is home to the Western Area Demilitarization Facility (WADF) which has the capability to demilitarize ammunition through resource recovery versus destructive methods. In fiscal year 2001, funds were received to initiate optimization of the hot gas decontamination facility at WADF, thereby greatly enhancing WADF and DOD's capability to explore fully alternative technologies. Work on the project continues.

NEW FORCE-SIZING

Question. Based on what we read in the press, the QDR will spell out a new force-sizing requirement of being able to win one war decisively, while repelling and defeating aggression in another part of the world. If the United States isn't prepared to fight a war on two fronts, doesn't that provide an invitation to China to initiate a major conflict with Taiwan when the United States is engaged in a major conflict in another part of the world?

Answer. Under the new force-sizing construct in the 2001 QDR Report, U.S. forces will be shaped to defend the United States, deter aggression and coercion forward in critical regions, swiftly defeat aggression in overlapping major conflicts, decisively defeat the adversary in one of those conflicts, and conduct a limited number of smaller-scale contingency operations.

The new construct serves as a bridge from today's force, developed around the threat-based, two major theater construct, to a further, transformed force. The United States will continue to meet its commitments around the world, including Southwest and Northwest Asia, by maintaining the ability to deter aggression in two critical areas in overlapping timeframes. The United States is not abandoning planing for two conflicts to place for fewer than two. On the contrary, DOD is changing the concept altogether by planning for victory across a spectrum of possible conflict.

QUESTIONS SUBMITTED BY SENATOR DIANNE FEINSTEIN

NATIONAL MISSILE DEFENSE PROGRAM

Question. As I understand it, one of the problems in convincing China that the National Missile Defense (NMD) is not aimed at them is that regardless of what architecture is under consideration even a rudimentary system is well configured to counter the threat facing the United States from China's nuclear missile forces. What is your understanding of this issue? If U.S. development and deployment of NMD causes China to seek to "break out" and deploy additional nuclear missiles, will NMD have served its objective of making the United States more secure from the threat of nuclear attack, or will it, in fact, have made us less secure? Are there alternate NMD architectures that might address some of China's concerns?

Answer. The United States has been working to make clear to China that the U.S. missile defense program does not threaten them. Our missile defense program is designed to counter the comparatively limited missile threat from rogue states and the possibility of an accidental or unauthorized launch. Only those foreign actors with hostile intent towards the United States and its interests have reason to be concerned about U.S. missile defenses.

China's modernization efforts predate the U.S. missile defense program, and China will increase the size and capabilities of its nuclear arsenal regardless of U.S. BMD-related actions. Thus, linking the modernization of China's offensive nuclear forces to U.S. missile defense efforts is misleading. In our continuing consultation with the Chinese, we have told them that their ongoing modernization efforts are unnecessary and injurious to regional stability. Missile defense—which is one element of a broader U.S. strategy to combat the proliferation of missiles and weapons of mass destruction—can contribute to that stability.

MISSILE DEFENSE PLANS

Question. According to a story earlier this year in the Russian periodical Nezavisimaya Gazeta, Russia and China have held talks on a defense treaty designed "to oppose U.S. influence and to counter the Pentagon's plans to create an anti-missile shield in America and a part of Asia." Are you concerned that U.S. plans for missile defense may drive increased Russian-Chinese security cooperation? How should the United States react to closer Russian-Chinese security ties?

Answer. Since that story appeared, Russia has indicated a willingness to move forward on its relationship with the United States irrespective of U.S. plans to move beyond the ABM Treaty. The United States has been regularly discussing our missile defense plans with both Russia and China. These discussions are part of an effort to create a new strategic framework. We are encouraged by our progress to date and are confident that this new framework can be achieved.

NATIONAL MISSILE DEFENSE

Question. According to a September 2, 2001 story in the Washington Post, an administration official indicated that as a "sweetener" for China to accept U.S. plans to test and deploy NMD, the United States would "signal that it recognizes both sides might want to resume nuclear weapons testing in the future." An article in The New York Times, also on September 2, 2001, indicated that the Administration planned to abandon its objections to a Chinese nuclear and missile buildup in an effort to overcome China's opposition to NMD. What is the Administration's policy regarding engaging China on National Missile Defense? Has or will the Administration signal to China, either tacitly or otherwise, that it can go forward with nuclear testing or a nuclear or missile buildup? Are you concerned that such a course might

set off a nuclear arms race in Asia? If China tests nuclear weapons or seeks to build up its nuclear or missile forces, what is your expectation of how India might react? Pakistan? Other countries in the region?

Answer. These press stories are incorrect. The United States will not seek to overcome China's opposition to missile defense by telling the Chinese that we do not object to an expansion of their nuclear ballistic missile force or that we would accept their resumption of nuclear testing. The Administration's policy is to reduce the level of offensive nuclear weapons in the world, to lessen the risk of nuclear war, and to protect the United States and its military forces, allies, and friends from the threat of ballistic missile attack. In that context, the Administration is committed to holding intensive discussions with China.

QUESTIONS SUBMITTED BY SENATOR HERB KOHL

MISSILE DEFENSE PRIORITY

Question. As we all know, our budget is turning out to be much tighter than we imagined it would be earlier this year. We have very little money to work with for fiscal year 2002, and a host of priorities on which we all agree we should spend significant funds—a prescription drug benefit, education reform, NIH research, crime fighting, etc. Not the least of these priorities are your plans to modernize our nation's defense system.

Given all these great needs, and our dwindling federal resources, can you explain to me why now the time to pursue the possibly unattainable goal of completely walling ourselves off from outside threats with a massive, untested missile defense system? Is this really this best time—financially and in terms of the threats that we actually face—to take such a high cost gamble?

Answer. The priority the Department places on missile defense reflects the current Administration's understanding of the growing threat the United States faces from short-, medium-, and long-range ballistic missiles. While we are just beginning to field systems to reliably counter the shorter-range threats, there is still much work to be done before we will be in a position to deploy capabilities to protect United States and allied cities and troops against the emerging longer-range threats from rogue states, whose leaderships may use these offensive capabilities for purposes of terror, coercion, or aggression.

While we currently have deployed many systems to counter threats from the land, sea, and air, and we have initiatives and operations to take care of numerous other defense needs, today we have no capability against longer-range threats against the American population. Nor do we currently have a capability to defeat the medium- and intermediate threats that could threaten our troops and allied and friendly cities this decade. Much like the threat we expect to face, the Ballistic Missile Defense System we are endeavoring to deploy is unprecedented.

The Administration will pursue a robust missile defense research, development, test, and evaluation (RDT&E) program to acquire the capabilities to deploy limited, but effective missile defenses as soon as possible to protect the United States, our deployed forces, and our friends and allies. The proposed missile defense funding for fiscal year 2002 represents our commitment to developing a rigorous test program, which will be essential to our ability to determine which technologies and basing modes will be most effective against what by all measures is a very dynamic threat. Early deployed capabilities may be expected to provide more protection than we currently have.

Missile defense technologies have been under development for years. Many of the technologies required to build an effective BMD system are in hand and are improving year by year. The challenge before missile defense developers is in engineering the system. We will increase our knowledge of system capabilities over time through our RDT&E activities, and especially our testing program. These activities will give us a sound understanding of the technological and engineering possibilities inherent in the system we intend to deploy.

ADDITIONAL FUNDS

Question. According to a recent editorial the budget you have sent to Congress is larger after adjusting for inflation than some of the budgets you prepared in the Ford Administration. With spending at 90 percent of the Cold War levels—but with no threat like the former Soviet Union in sight, why do we need the extra $18 billion in funds for fiscal year 2002 just recently requested by the Administration?

Answer. The $18 billion is needed to begin to bolster our readiness and capabilities to counter 21st century threats like terrorism.

REDUCTIONS

Question. If we cannot find the extra $18 billion you have requested without severely cutting back other budgeted priorities, can you make reductions in your own budget to cover these new initiatives?

Answer. If the President's full request was not appropriated, the Department's alternatives would be to try to find reductions that would not undermine current high priorities like fighting terrorism (almost impossible) or urging the President to request supplemental fiscal year 2002 appropriations.

MILITARY HEALTH CARE

Question. Part of the 2001 Supplemental included funds for military retiree health care. Many retirees in the state of Wisconsin have contacted my office because they cannot find health care providers willing to accept TRICARE Prime. Wisconsin is a primarily rural state with no active duty bases so doctors are not familiar with DOD health programs. What is the Administration doing to promote TRICARE Prime and ensure the retirees have choice no matter where they live?

Answer. We are working hard to assure an adequate provider network in Wisconsin. The Prime service area now includes 403 specialists and 166 Primary Care Managers.

There are a number of efforts ongoing within Wisconsin to improve access for all of our beneficiaries in the state. In the majority of highly populated areas, TRICARE networks are in place. There is a TRICARE Service Center located in the Royce Federal Plaza in Milwaukee that assists beneficiaries with information about providers who accept TRICARE. They may be reached at 1–800–941–4501 during normal business hours. As part of the ongoing effort to enhance services in rural areas, TRICARE lead agent staff from Region 5 are now working with the County Veterans Services (CVS). The CVS will work closely with Humana Military Healthcare Services and Region 5 staff to help inform people about TRICARE in their home counties.

Humana is also working with the Department of Veterans Affairs (DVA) to offer more choice to TRICARE beneficiaries. Negotiations are underway in Veterans Integrated Service Network (VISN) 12, which includes facilities in Chicago and the state of Wisconsin. The VISN 12 network includes three DVA medical centers and several outpatient clinics. This contractual arrangement will allow additional network choices for TRICARE beneficiaries in the state of Wisconsin.

OPERATIONS TEMPO

Question. Patrolling the no-fly zones in Northern and Southern Iraq seem to be the most exhausting and difficult missions for the services—especially since these missions have gone on for almost ten years. Is the Administration developing alternative methods for accomplishing these missions that do not entail increasingly dangerous overflights?

Answer. In the aftermath of the September 11 attacks, President Bush is ruling out no alternatives with respect to troubled regions—notably including the region in and around Iraq. Still, the operations tempo of our armed forces is increasing and likely to remain high as we focus on defeating global terrorism.

BASE CLOSURE AND EFFICIENT FACILITIES INITIATIVE

Question. I am glad to see the Administration has outlined a proposal to reduce unneeded defense infrastructure. Another round of base closures has the potential to save the Department of Defense billions of dollars in the long run. Is the Administration's Efficient Facilities Initiative more insulated from political influence that the previous base closure rounds? What impact will environmental pollution have in determining which bases are targeted for closure?

Answer. Establishing an independent, bi-partisan Commission provides the insulation from political influence. Similarly, the requirement for both the President and Congress to vote Commission recommendations on an "all or nothing" basis insures fairness in the recommendation and approval phases. Additionally, the base realignment and closure (BRAC) legislation recently passed by the Senate contains two provisions to further enhance fairness: (1) to emphasize the importance of military value over any other consideration, the Senate version requires military value to be the primary consideration in making recommendations for base closures and realignments; and, (2) to require that privatization in place must be specified in the Commission recommendation as a method of closure or realignment and that it be the most cost effective method of implementation, if the Department would choose this avenue to implement a base closure.

Regarding the impact of environmental pollution during a future BRAC round, the environmental impact was one of the eight criteria used in the previous rounds for selecting military installations for closure and realignment. However, the Department gave priority consideration to the first four criteria, collectively referred to as military value. By policy, environmental costs at closing bases were not to be considered in the cost of closure calculations. Using environmental costs as a determining factor would lead the Department to the perverse logic of closing only the cleanest facilities. The Department has a continuing legal obligation for environmental restoration regardless of whether a base is closed or realigned. DOD budgeted about $7 billion during the 1990–2001 implementation period of the four BRAC rounds for environment. Factoring these costs, as well as the other implementation costs for these rounds, still yields net savings during this period of $16 billion.

QUESTIONS SUBMITTED BY SENATOR TED STEVENS

ENGAGEMENT POLICIES AND PROGRAMS

Question. Secretary Rumsfeld: The Department of Defense has increased its engagement policies and programs throughout the world to support the United States' interests overseas. Each of the regional CINC execute programs to enhance cooperation and build relationships through mutual understanding. The engagement policies are particularly helpful in the Asia-Pacific region, which lacks a formal NATO-type defense framework. Over the years, the Pacific engagement program has increased the goodwill and influence of the United States and provided important access throughout the region. What is your view of Pacific command's engagement programs and policies?

Answer. The President's fiscal year 2002 defense budget request did sustain key programs to support U.S. interests in the Asia-Pacific region. In the aftermath of the September 11 attacks, my staff will need to reevaluate all our major regional programs.

KEY PROGRAMS

Question. Does the fiscal year 2002 defense budget sustain the key programs to support U.S. interests in the Asia-Pacific region?

Answer. The President's fiscal year 2002 defense budget request did sustain key programs to support U.S. interests in the Asia-Pacific region. In the aftermath of the September 11 attacks, my staff will need to reevaluate all our major regional programs.

QUESTIONS SUBMITTED BY SENATOR PETE V. DOMENICI

PERCENT OF GROSS DOMESTIC PRODUCT (GDP) AS A MEASURE OF THE DEFENSE SPENDING

Question. Some in the Defense Department have pointed out that the Cold War average of defense spending has been 5 percent of the Gross Domestic Product; it is now at 3 percent of GDP. Some urge that defense's share of GDP be increased to 3.5 or even 4 percent.

Increasing defense spending from the current 3 percent to 3.5 percent sounds modest, but it actually is a significant increase, is it not? (Committee staff calculate a defense budget at 3.5 percent of GDP to be about $380 billion, a $37 billion increase over the currently proposed $343 billion.)

Answer. Increasing defense spending to 3.5 percent of GDP indeed would be significant.

Question. In some past years, the defense budget was smaller, and the economy was much smaller. A percent of GDP calculation would have shown a smaller defense budget to be a higher percent of GDP. For example, in 1941 when the economy was much weaker, defense spending was very small, and Japan attacked Pearl Harbor, defense comprised 5.6 percent of GDP.

Moreover, the percent of GDP for defense can increase not just by raising defense spending but also when defense spending is level and the economy is contracting. For example, if this country goes into recession and defense spending remains constant, the percent of GDP for defense may increase well above 3.5 percent.

Percent of GDP is a strange measure of defense spending. It can show increases when defense spending is stagnant or even shrinking. Conversely, it can show decreases when defense spending is increasing.

What are your views on the use of share of GDP as a measure of defense spending? Why do some in DOD use it?

Answer. The use of share of GDP is a good, not perfect measure of defense spending. It is useful because it takes factors out of inflation and it takes into account the size of the U.S. economy as measured by GDP.

CONSEQUENCES OF NOT SUPPORTING BUDGET AMENDMENT

Question. Chairman Conrad (and Senator Levin [Chairman of Armed Services]) have made it clear they may not agree to increase the 2002 defense budget by the additional $18.4 billion the President has requested. They explain that this additional spending could mean a "raid" on the Medicare "surplus" and perhaps also the Social Security "surplus."

If the Chairman of the Budget Committee refuses to release the Reserve Fund in the Budget Resolution to accommodate the President's 2002 budget amendment and if the Senate refuses to approve the additional spending by the 60 votes that would be needed to overcome that decision by Chairman Conrad, what would be the consequences?

Answer. Failure to fully fund the President's fiscal year 2002 request would devastate military force readiness and seriously hamper our ability to counter terrorism and other 21st century threats.

Question. Where would the Defense Department make the necessary reductions, if it were given a choice?

Answer. I do not know where we would make reductions without real damage. I expect I would urge the President to request supplemental fiscal year 2002 appropriations, given the urgency of moving decisively against global terrorism.

Question. What would be the consequences for your "Strategic Review?" Readiness and training?

Answer. The consequences would be widespread and deep damage to our strategy and readiness to focus more effectively on 21st century threats like terrorism.

Question. The ability to support ongoing deployments such as in the Balkans? the Persian Gulf? the Middle East?

Answer. The consequences would be severe.

Question. The financial management reform that the Chairman of the Appropriations Committee, Senator Byrd, has urged?

Answer. We would continue full speed ahead with financial management reform, since that does not depend heavily on current year funding.

DEFENSE HEALTH PLAN COST GROWTH

Question. Since 1994, DOD budget requests have underfunded the Defense Health Program. For example, in 2000, Congress was forced to add $1.3 billion to pay actual Defense Health Program costs. In the 2001 Supplemental, DOD requested an additional $1.4 billion to pay actual costs; the House increased that amount to $1.6 billion; the Senate increased it to $1.5 billion.

For the 2002 budget, DOD requested an additional $3.9 billion to pay new benefits to military retirees added by Congress (CBO had estimated the cost of these benefits at just $1.7 billion, [DOD anticipates a higher participation rate]). DOD also added another $2.6 billion to pay for what are anticipated to be actual costs.

The 2002 budget resolution assumed an additional $1.4 billion for the Defense Health Program in 2001, the full $3.9 billion estimated by DOD to pay new benefits for military retirees legislated by Congress, and up to an additional $3.1 billion for full Defense Health Program costs, all in 2002.

The total Defense Health Program is currently estimated at $17.9 billion in the Operations and Maintenance budget for 2002. This amount does not include the salaries of Defense Health Program personnel, which approximates an additional $5 billion in the Military Personnel budget.

Question. Why are the Defense Health Programs accelerating as fast as they are?

Answer. The fiscal year 2002 Defense Health Program (DHP) President's Budget was submitted at $17.6 billion for Operations and Maintenance funding which represents a $5.9 billion increase over fiscal year 2001. Congress provided a new TRICARE for Life benefit that represents $4.1 billion of the increase. The bulk of the remaining increase is explained by the 15 percent growth in the pharmacy budget and an increase in the cost of purchasing health care from the civilian sector.

Question. What additional Defense Health Program cost growth do you anticipate in the future?

Answer. In the future, the DHP is likely to see upward cost growth pressure in several areas. It seems unlikely that the cost of pharmacy supplies will decrease below double-digit growth rates over the next five years. Nor does it seem likely that

the cost of purchased health care will decrease much below current rates of growth, which are in the range of 12 percent, over the same period of time.

As the government focuses upon Homeland Defense and asymmetric warfare threats, the Department will need to review our current budgets for equipment, training, and facilities to effectively counter chemical/biological and similar threats. The DHP maintains about 80 hospitals and hundreds of clinics worldwide. The cost to harden and secure these facilities to acceptable standards will be high.

Question. What cost growth containment are you considering?

Answer. The DHP is striving to evaluate performance through the use of relevant, reliable metrics. This process should lead to decisions at all levels that emphasize economic efficiencies. The DHP will continue to achieve efficiencies in the cost of providing heath care through improved contracting practices to procure supplies and equipment and through improved contract vehicles to procure purchased health care. There will be a strategic review of the DHP's MILCON plan to ensure it is consistent with the Department's policy and reflects the most appropriate use of these resources. The DHP will continue to insist that Information Management and Information Technology (IM/IT) procurements are cost effective and utilize commercially available software where appropriate. We are currently developing and testing several new programs to distribute resources more effectively. The Department is currently implementing Activity Based Costing (ABC) that will enable the TRICARE Management Activity to carefully review DHP costs and tie obligations to performance. We are also testing a plan to better utilize our Military Treatment Facility resources within geographic regions through a program to empower them to optimize resources across the region. In cooperation with the Defense Financing and Accounting Service, the DHP is working to improve the efficiency of its financial systems. Controlling the growth in health care cost growth is a high priority of the DHP.

QUESTIONS SUBMITTED BY SENATOR CHRISTOPHER S. BOND

C–17

Question. The need for additional strategic airlift assets has been widely discussed and reinforced with the MRS–05 study (Mobility Requirements Study completed late 2000 showing we need additional airlift). The current budget proposal does not include a request for a follow-on multi-year procurement program or funding for advance procurement for a new multi-year acquisition program for the C–17. It has been reported that by establishing such a follow-on multi-year program for the current production run which ends this year we can save in the neighborhood of $20 million per aircraft. If we establish a new MYP and purchase another 60 aircraft, which we can certainly justify in terms of stated requirements, we will realize a savings to the taxpayer of $1.2 billion!

If we're to fund the future defense force in a fiscally tight environment wouldn't it seem prudent to fund advance procurement for the C–17 for fiscal year 2002 and establish a Multi-Year Procurement for the C–17?

Answer. The Air Force supports the fiscal year 2003 C–17 follow-on multi-year procurement (MYP) program and the Commercial Application of Military Airlift Aircraft (CAMAA) program. The Air Force acknowledges that this was not evident in our recent budget submission, however, the Air Force just received Department of Defense (DOD) support for these programs.

We support the intention of the language written by both the House Armed Services Committee (HASC) and the Senate Armed Services Committee (SASC). We will continue to support the committees through conference as they draft the final authorization bill language. In addition, the Air Force has provided draft language to HASC, SASC, Senate Appropriations Committee (SAC), and House Appropriations Committee (HAC) for review and potential inclusion into the fiscal year 2002 Defense Acts. This potential language will enable the Air Force to pursue a fiscal year 2003 MYP and CAMAA.

GUARD AND RESERVES

Question. What criteria or protocols are exercised in determining the value and relevance of Guard and Reserve structure that enable that structure to be factored into the National Military Strategy?

Answer. The Defense Quadrennial Review Study directed the Department to undertake a comprehensive review of Active and Reserve mix, organization, priority missions, and associated resources. It indicated that the review would build on recent assessments of Reserve component issues that highlighted emerging roles for

the Reserve components in the defense of the United States, in smaller contingencies, and in major combat operations.

The review will commence immediately and will identify a range of innovative options concerning active and reserve force mix. An interim report will be completed by 1 March 2002. The final report will be completed by May 2002.

Question. Recent developments indicate severe fiscal constraints for defense spending. To what extent has the lack of resources for defense competed with strategy-based decision making in determining the size and shape of our military forces and, significantly, the roles and missions for the National Guard and Reserve?

Answer. The lack of resources drives many of the decisions with regard to priority, resourcing, force structure types, and basing. The roles and missions of the Guard and Reserve are considered right along with the active component. The Military construction (MILCON) and Real Property Maintenance accounts have been bill payers for other DOD priorities for many years. However, for the first time in over two decades, the President's fiscal year 2002 Reserve component MILCON request begins to buy back that deficit by addressing three basic basing elements. First is the reduction of approximately 20 percent of the infrastructure through the Efficient Facilities Initiative. Next is to focus the resources on a 67 year plant replacement cycle, and to fix those facilities in a C–3 and C–4 (less than minimum) facilities readiness status. This approach is considered to be a good first step, one that when coupled with other aspects of funding is positioned to affect the quality of life, recruitment and retention of the force.

Question. What is your long-term view of the role of the Guard and Reserve in war-fighting plans and how would the Guard and Reserve be included in the process?

Answer. The Guard and Reserve have demonstrated their capability to contribute to virtually every scenario in the war-fight. Every CINC has plans to employ Reserve components over a wide range of requirements. Six of the eight Army National Guard Divisions are part of the new Joint Strategic Capabilities Plan. These divisions will be considered in war planning conducted by the CINC's staff. The current Air Bridge could not function without the Guard and Reserve, nor could the increased security demands be filled without their presence. The Guard and Reserve will continue to be an integral part of any plan or execution for the foreseeable future.

B–1 PROGRAM

Question. The decision to remove the B–1 program from the Guard and use the alleged savings to modernize the B–1 program in the active component is a process by which the Guard structure is being sacrificed to modernize active component equipment. Are we likely to see this process continue as we attempt to modernize equipment across the board?

Answer. No. The decision to reduce the Air National Guard force structure is not based on credibility or lack thereof of the reserve component. The decision is based on a requirement to maintain the B–1 as viable, survivable and lethal throughout the next decade. Our studies have indicated that 60 fully capable B–1s, in synergy with the remaining bomber fleet, will meet the nation's global security requirements we foresee today. Consolidation savings were generated by reducing duplicative small scale operations and in this case, two of the three units were Air National Guard. It is still an important Air Force priority to capture the superb experience, capability and service the Air National Guard men and women bring to the Air Force combat mission.

QUESTIONS SUBMITTED BY SENATOR KAY BAILEY HUTCHISON

PAC–3 TECHNOLOGY FOR SM–5

Question. One method potentially worth examining concerning missile defense is integrating the proven seeker technology from the Patriot PAC–3 into the SM–5 STANDARD missile. Such an approach may both expedite fielding of the Navy's area-wide defense system, and reduce the expense of what may be an otherwise redundant development effort.

Will you ask the Navy to explore this idea?

Answer. We are committed to exploring every potential avenue for accelerating the delivery of a Navy Area Theater Ballistic Missile Defense capability to the field. The Ballistic Missile Defense Organization and the Navy are exploring the integration of PAC–3 seeker technology onto the standard missile. Integration of PAC–3 technology may be feasible and ongoing analysis is focused on identifying and quan-

tifying in terms of cost, schedule and performance, the merit of adopting such an approach.

The SM–5 missile is a Navy science and technology initiative for an advanced interceptor optimized for Land Attack Cruise Missile Defense and Offensive Counter Air missions. Working with the Army for the past several years, the SM–5 technology demonstration team has already used applicable PAC–3 technology. SM–5 expands the PAC–3 seeker design concept with advanced signal processing to counter future stressing threats and incorporated a pre-terminal semiactive capability to improve long-range accuracy. Funding for this initiative is expected to be an in-core element of the Navy PR03 budget, to include a live-fire demonstration in fiscal year 2005; however, no program of record for SM–5 engineering, manufacture, and design or fielding exists at present.

SPECTRUM MANAGEMENT

Question. Last week you and General Shelton sent a letter to the Congress regarding third generation wireless communications. In that letter you indicated that if the Department were to be forced to relocate from the Federal Government band of 1755–1850 MHz, such an action would have serious consequences on our National security and increase the risk to our military personnel. How is this so?

Answer. The letter sent to Congress indicated that if DOD were forced to relocate from the Federal band of 1755–1850 MHz prematurely, without a number of conditions being satisfied such as DOD relocation timelines, such action would have serious consequences to our National security and increase the risk to our military personnel. The conditions that must be met are provision of comparable alternate spectrum for systems to migrate to, timely cost reimbursement to pay for the relocation, and protection of existing DOD operations throughout any transitional period to avoid harmful interference between DOD systems and third generation (3G) systems. Initial studies by the DOD indicate that adequate comparable government spectrum may not be available.

The consequences of not satisfying the proposed conditions will be a degradation in DOD's ability to conduct missions associated with critical military systems that currently use this band. This mission degradation will result from unacceptable operational restrictions resulting from interference to and from 3G systems. The DOD systems currently requiring the use of this band provide a range of capabilities from the control of airborne precision strike munitions to tactical radio communications networks used by the Army and Marine Corps, to air combat training systems used to prepare U.S. fighter pilots to execute and survive missions over hostile territory, to space systems that provide communications, navigation, intelligence and weather support to U.S. forces. Without these systems, military personnel will face increased vulnerabilities in hostile situations, and the military options available to our nation's leaders will be substantially limited, causing a serious impact to National security.

Question. Why can't DOD migrate from this band prior to the next decade?

Answer. Many of the DOD major terrestrial systems that use the 1755–1850 MHz band are combat related. There are no commercial off-the-shelf (COTS) systems available to replace these systems. The DOD process of modifying or replacing current systems would involve the steps of requirements validation, establishing acquisition programs, budgeting funds, executing contracts, system design, testing the new systems, training personnel, and fielding new systems. Completing this process simultaneously for multiple major terrestrial systems operating in the band would be difficult to accomplish even by the 2010 date specified by DOD for non-space systems. Additionally, for space systems, the timeline of at least 2017 is based on the life expectancy of most satellite systems currently in space or about to be launched. Operational spacecraft cannot be modified on-orbit and must be allowed to continue operations to satisfy a variety of DOD missions that provide communications, navigation, meteorological data, surveillance and intelligence. Abandoning the use of operational spacecraft and their associated ground support infrastructure would cause serious loss of DOD capability that would jeopardize National security and the welfare of DOD personnel and destroy our ability to wage the war against terrorism.

AIR FORCE PILOT TRAINING REQUIREMENTS

Question. The following statement is an excerpt from the Secretary of Defense's justification for closing Reese Air Force base in Texas:

"The Air Force has more undergraduate flying training bases than necessary to support Air Force pilot training requirements." That is now an ironic statement considering that the Air Force is 1,200 pilots short even though its undergraduate flight training infrastructure is maxed-out.

Isn't this illustrative of how difficult it is to accurately forecast military requirements even in just a few years into the future?

Answer. It is difficult to accurately forecast military requirements, and forecasting pilot requirements is no exception. Reese AFB, Texas, and Williams AFB, Arizona, were closed for two principal reasons. First, it was thought that the Air Force could reduce its forces since the threat had diminished (e.g., dissolution of the USSR, reduction of Iraq's military). With fewer operational forces—for instance, active operational fighter and bomber aircraft have been reduced by over half in the past 10 years—the requirement for pilots and associated training was reduced. Second, Congressional legislation directed Joint undergraduate flying training where practical. The result of the legislation is the Joint Primary Aircraft Trainer System (JPATS). This comprehensive training package, in the process of being fielded, includes the T–6 Texan II, simulators and associated ground based training devices, scheduling software, academic courseware, and contractor logistic support. The JPATS system will replace the Air Force T–37B and the Navy T–34C. Additionally, the Air Force is currently fielding the T–38C, an enhanced aircraft with up-to-date avionics to be used for teaching advanced flying training and fighter fundamentals to our future pilots.

In the mid 1990's it became apparent that reduced retention, due to the high demand from the airline industry for pilots, and the higher than anticipated operational tempo (fivefold higher in the late 1990's than in the late 1980's), were putting a strain on our reduced forces. When combined with reduced pilot production, it became clear that an increase in pilot production was needed. Chief of Staff of the Air Force (CSAF) set the goal of 1,100 for annual pilot production. While the Air Force is able to meet the 1,100 pilot training annual requirement with its present infrastructure (T–37, T–1, T–38 aircraft and dedicated training bases), the standup of Moody AFB, GA as a training base will give us even more capability. Moody AFB will be the first Air Force base to utilize the JPATS methodology for training pilots. Moody AFB will specialize in JPATS training for the T–6 introductory trainer, while also utilizing the T–38C for training our pilots in fighter fundamentals. This differs from our other pilot training bases that have a more comprehensive training mission of introductory (T–6), advanced (T–1 and T–38), and fighter fundamentals (T–38C). Moody AFB gives us the capacity to produce even more pilots by surging without overstressing our established flight training infrastructure.

FUNDING

Question. A number of articles have appeared which assert that two Army Divisions, two Carrier Battle Groups and two Air Force Wings may be cut. How can this committee appropriate funds with and confidence that the programs we are funding will survive the QDR process?

Answer. The 2001 QDR was released on October 1, 2001, and so the committee can review it before appropriating funds.

REPROGRAMMING REQUEST

Question. Should we expect to see a massive reprogramming request?

Answer. No. The QDR's impact on the fiscal year 2002 budget will not be so great as to require a massive reprogramming request.

QUESTIONS SUBMITTED TO GENERAL HENRY H. SHELTON

QUESTIONS SUBMITTED BY SENATOR KAY BAILEY HUTCHISON

SURVIVOR BENEFIT PLAN

Question. I appreciate your strong support for legislation I introduced in June which would allow DOD to posthumously retire those service members who die in the line of duty. As you said in your letter, imminent deaths are the ultimate disability. Our military families should not be penalized because a loved one was not yet vested in the military retirement system. This is the only system that requires a person to serve at least twenty years before they are vested. Our Bill would allow the Departments to consider those who have made the ultimate sacrifice to our country to fully vest upon death.

Do the Services share your support for this legislation? Are they able to find their share (approx. 2 million) per year to solve this inequity?

Answer. The Services support providing Survivor Benefit Plan annuities to families of Service members who die on active duty. Legislation that would alleviate the

inequities between the benefits provided to survivors of active duty members who die instantly, and those who die after being disability retired, is the right thing to do.

OSD, the Joint Staff, and the Military Departments have been considering a legislative initiative to accomplish these objectives as part of the fiscal year 2003 Unified Legislation and Budgeting process. However, the specific elements of the proposal being developed have not yet been agreed upon, nor specific language adopted.

Finally, the funding associated with such a proposal is not included in the Military Department budgets. One of the Services' major concerns, as well as mine, is adding an increase to the Services' budgets without identifying a source for the necessary funding.

ENVIRONMENTAL IMPACTS LIMITING TESTING AND TRAINING

Question. Members of the subcommittee have become increasingly aware of the growing impact environmental concerns have on our Services' ability to thoroughly and realistically train its forces.

Would you please describe those impacts and your recommendations on remedying the situation?

Answer. This is a critical training readiness issue. Historically, specific encroachment issues have been addressed at individual ranges, most often on an ad hoc basis. We have won some of these battles, and lost others, but in the aggregate we are losing ground, sometimes literally. The myriad forms of encroachment our ranges face threaten to complicate and in some cases severely restrict our ability to conduct critical training. The overall trends are adverse, because the number of external pressures is increasing, and the readiness impacts are growing. Future testing and training needs will only further exacerbate these issues, as the speed and range of test articles and the number of training scenarios increase in response to the need to match real-world situations that our forces will face when deployed. This is why we must begin to address these issues in a much more comprehensive and systematic fashion. It will also be important to work with regulators, special interests, other federal agencies, and communities in order to clearly define the issues from all viewpoints and to reach mutually acceptable solutions, whenever possible.

The Senior Readiness Oversight Council (SROC) determined that DOD needs a comprehensive and coordinated approach to address range sustainability with an emphasis on: (1) Endangered Species Act, (2) unexploded ordnance (UXO), (3) frequency spectrum encroachment, (4) maritime sustainability, (5) national airspace system, (6) air quality, (7) airborne noise, (8) urban growth, and (9) outreach. The DOD strategy for range sustainment will include a comprehensive sustainability framework that addresses the test and training mission, regulatory requirements, community support, and the range capabilities used to support the mission. Currently, the Sustainable Range Working Group (SRWG) is coordinating efforts to finalize a DOD sustainability directive that will lay the foundation for this comprehensive strategy.

RESOURCE SHORTFALL

Question. When this subcommittee received the testimony of the CINC's, they expressed concern over a lack of preferred munitions for training and operations.

How does this resource shortfall affect the readiness of our Armed Forces?

Answer. The lack of preferred munitions for training and operations has been highlighted as a CINC concern in the Joint Monthly Readiness Review process and reported by the Department in the Quarterly Readiness Report to Congress. Although the shortfall of preferred munitions is a concern, current inventories are fully adequate to support a Major Theater War (MTW) scenario. Other less accurate munitions may need to be used should a second MTW arise concurrently, and the use of these substitute munitions would increase the risk of meeting operational timelines and objectives in the second war. To address these concerns, funding for preferred munitions was increased in the President's fiscal year 2002 budget.

CONCLUSION OF HEARINGS

Senator INOUYE. This concludes our scheduled hearings for the year, and I want to thank the members of the committee for their participation. This subcommittee will stand in recess subject to the call of the chair. Thank you very much.

[Whereupon, at 12:45 p.m., Wednesday, September 5, the hearings were concluded, and the subcommittee was recessed, to reconvene subject to the call of the Chair.]

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