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S. HRG. 110–201, PT. 5

DEPARTMENT OF DEFENSE AUTHORIZATION FOR APPROPRIATIONS FOR FISCAL YEAR 2008

HEARINGS

BEFORE THE

COMMITTEE ON ARMED SERVICES
UNITED STATES SENATE

ONE HUNDRED TENTH CONGRESS

FIRST SESSION

ON

S. 1547

TO AUTHORIZE APPROPRIATIONS FOR FISCAL YEAR 2008 FOR MILITARY ACTIVITIES OF THE DEPARTMENT OF DEFENSE, FOR MILITARY CONSTRUCTION, AND FOR DEFENSE ACTIVITIES OF THE DEPARTMENT OF ENERGY, TO PRESCRIBE PERSONNEL STRENGTHS FOR SUCH FISCAL YEAR FOR THE ARMED FORCES, AND FOR OTHER PURPOSES

PART 5
EMERGING THREATS AND CAPABILITIES

APRIL 11 AND 25, 2007

Printed for the use of the Committee on Armed Services

DEPARTMENT OF DEFENSE AUTHORIZATION FOR APPROPRIATIONS FOR FISCAL YEAR 2008—Part 5 EMERGING THREATS AND CAPABILITIES

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DEPARTMENT OF DEFENSE AUTHORIZATION FOR APPROPRIATIONS FOR FISCAL YEAR 2008

WEDNESDAY, APRIL 11, 2007

U.S. SENATE,
SUBCOMMITTEE ON EMERGING THREATS
AND CAPABILITIES,
COMMITTEE ON ARMED SERVICES,
Washington, DC.

NUCLEAR NONPROLIFERATION PROGRAMS AT THE NATIONAL NUCLEAR SECURITY ADMINISTRATION AND THE COOPERATIVE THREAT REDUCTION PROGRAM AND THE PROLIFERATION SECURITY INITIATIVE AT THE DEPARTMENT OF DEFENSE

The subcommittee met, pursuant to notice, at 9:36 a.m. in Room SR–232A, Russell Senate Office Building, Senator Jack Reed (chairman of the subcommittee) presiding.

Committee members present: Senators Reed, E. Benjamin Nelson, Warner, Collins, and Dole.

Other senators present: Senators Levin and Chambliss.

Committee staff member present: Richard D. DeBobes, staff director.

Majority staff members present: Madelyn R. Creedon, counsel; Richard W. Fieldhouse, professional staff member; and Michael J. McCord, professional staff member.

Minority staff members present: Michael V. Kostiw, Republican staff director; and Lynn F. Rusten, professional staff member.

Staff assistants present: Kevin A. Cronin and Jessica L. Kingston.

Committee Members' assistants present: Jay Maroney, assistant to Senator Kennedy; David E. Bonine, assistant to Senator Byrd; Elizabeth King, assistant to Senator Reed; Benjamin Rinaker, assistant to Senator Ben Nelson; Mark J. Winter, assistant to Senator Collins; Clyde A. Taylor IV, assistant to Senator Chambliss; Lindsey Neas, assistant to Senator Dole; and John L. Goetchius, assistant to Senator Martinez.

OPENING STATEMENT OF SENATOR JACK REED, CHAIRMAN

Senator REED. Good morning. First let me welcome our witnesses this morning, Senator Sam Nunn and Senator Richard Lugar. Thank you both. I don't know if we can fully appreciate the contributions you've made to securing the world and protecting people

from the worst possible situation through your efforts as United States Senators, and your continuing effort, Senator Nunn, in leading the way for sensible nonproliferation policy.

I have a statement that I'd like to put in the record, just simply mentioning that we'll have two panels. We'll have Senator Nunn and Senator Lugar on one panel. Then on the second panel, we'll deal with the implementation issues with Will Tobey, the Deputy Administrator for Nuclear Nonproliferation at the National Nuclear Security Administration, Department of Energy (DOE); and Joseph Benkert, the Principal Deputy Assistant Secretary of Defense for Global Security Affairs.

At this point, I invite my colleagues, to make brief opening statements. I know we're all very much interested in listening to Senator Nunn and Senator Lugar.

[The prepared statement of Senator Reed follows:]

PREPARED STATEMENT BY SENATOR JACK REED

Good morning, it is a pleasure to welcome all of our witnesses here this morning. Senator Nunn, it is an honor to welcome you back to the Armed Services Committee and Senator Lugar it is always good to have you with us. We can never know what disasters were averted by your shared wisdom and prescience in setting up the Nunn-Lugar program to secure materials and keep scientists in the former Soviet Union gainfully employed in the early days following the collapse. Your continued support and dedication to the programs to secure nuclear and other weapons of mass destruction materials and technologies and to destroy the corresponding delivery systems has been unfailing. I think all my colleagues join me in thanking you for raising, and never letting us forget, the threats posed by unsecured nuclear, biological, and chemical, materials and weapons.

We look forward to your thoughts on future proliferation threats and your views on the next steps for the Nunn-Lugar and nonproliferation programs at the Departments of Defense and Energy.

Our second panel this morning will focus on those programs and their implementation. We look forward to a good discussion with Will Tobey, the Deputy Administrator for Nuclear Nonproliferation at the National Nuclear Security Administration, Department of Energy, and Joseph Benkert, Principal Deputy Assistant Secretary of Defense, Global Security Affairs.

All of our witness have submitted prepared opening statements and without objection those will be included in the hearing record.

To allow more time for discussion with both panels, and because Senator Lugar has to meet an obligation in another committee, I will forgo any further opening remarks.

Senator REED. Senator Dole.

STATEMENT OF SENATOR ELIZABETH DOLE

Senator DOLE. Thank you, Mr. Chairman. I certainly want to join you in welcoming all of our witnesses this morning, but especially, Senator Lugar, Senator Nunn—the founding fathers of the Cooperative Threat Reduction (CTR) Program. We appreciate so much all of the work through the years, and your continuing concern, and look forward to hearing this morning how you size up the 15 years, whether the program has met the expectations at the time that it was authorized in 1992. Also, your recommendations with regard to what more the United States government might do to address the threat of proliferation in the post-September 11 world.

I have a statement which I'll submit for the record, but in the interest of time, let me just again welcome you, and say what a privilege it is to have the opportunity to work with you on these vitally important issues.

Thank you, Mr. Chairman.

[The prepared statement of Senator Dole follows:]

PREPARED STATEMENT BY SENATOR ELIZABETH DOLE

I would like to join Senator Reed in welcoming our witnesses this morning. It is a special honor to have with us today Senator Lugar and Senator Nunn, the founding fathers of the Nunn-Lugar Cooperative Threat Reduction (CTR) program.

I look forward to hearing your assessments of whether the CTR program has fulfilled the expectations you had when you first created it in 1992. We welcome your recommendations regarding what more the United States Government might do to address the threat of proliferation in the post-September 11 world.

The threat of weapons of mass destruction (WMD) getting into the hands of terrorists remains the pre-eminent threat to our country and our allies, as the Director of National Intelligence confirmed in testimony before the Armed Services Committee just a few weeks ago,

The programs and missions for which Mr. Benkert and Mr. Tobey are responsible—the Department of Defense (DOD) and Department of Energy (DOE)—are aimed at reducing that threat, and managing the consequences should such weapons ever gel into the wrong hands or be utilized. These programs are indeed vital to our national security.

The CTR program is well known to many of us. Perhaps less well-known is the fact that DOE also has an impressive and growing array of nonproliferation programs, including Megaports and the Global Threat Reduction Initiative. The plutonium disposition program, however, faces challenges in both Russia and the United States. We look forward to a dialogue with Mr. Tobey about the way forward on that program. More generally, we are interested in our witnesses' assessments of the progress made to date, and your vision and recommendations regarding how these programs in both departments should proceed in the future.

The fiscal year 2008 DOD and DOE budget requests demonstrate the administration's continuing commitment to threat reduction and nonproliferation programs. However, I note that the budget profile for CTR has been declining over the past few years, while the DOE budget is robust.

I would be interested in the testimony of our witnesses today as to whether the fiscal year 2008 and future years budget, reflects the proper prioritization and sufficient resources and authorities for addressing the continuing threat we face. I believe that we in Congress must maintain and strengthen our support for these vital nonproliferation programs in the future.

Let me again join our chairman in thanking our witnesses for their service and for appearing here today.

Senator REED. Thank you very much, Senator Dole.

Senator Nelson.

Senator BEN NELSON. I have no opening statement.

Senator REED. Thank you very much.

We're joined by Senator Chambliss, who is not a member of the panel, but specifically wanted to be here this morning and participate. Thank you for joining us, Senator.

STATEMENT OF HON. SAXBY CHAMBLISS, U.S. SENATOR FROM THE STATE OF TEXAS

Senator CHAMBLISS. Thank you very much, Mr. Chairman, for letting me participate on this panel.

I'm particularly pleased to be here because of Senator Lugar, who has been a great friend during my years in the House, and now in the Senate, being such a leader on this issue.

But, most significantly, to be here to welcome my longtime dear friend, my constituent, formerly my Senator, Senator Sam Nunn. He is such a great American, such a great guy, and a guy who I don't get to spend enough time with, but who from time to time, I still use as a great resource. He's very generous with his time with me.

I'm particularly pleased that he's here today to talk about an issue that he and Senator Lugar had been at the forefront on for decades. This is a very complex world that we live in today, and we're looking at countries today who are developing nuclear weapons that we never imagined would develop those weapons in years' past. These two gentlemen have been at the forefront of trying to make sure that we remove the opportunity from any bad guy—terrorist or potential terrorist, or countries who potentially might use those weapons in the wrong way—they have really provided a pathway to trying to make sure that the bad guys never got those weapons in their hands, by not having the ability to develop those weapons.

So, I do thank them for being here, I thank them for their leadership on these issues, and I look forward to their testimony today, and continuing to work very closely with both Senator Nunn and Senator Lugar to make sure that we continue down the path of removing the capability of the terrorist world from ever being able to develop nuclear weapons or nuclear material for the wrong reasons.

Senator REED. Thank you very much, Senator Chambliss.

Senator Lugar, I understand that you have to be at another hearing at 10 o'clock. We'll begin with your testimony and then we'll go to Senator Nunn.

STATEMENT OF HON. RICHARD G. LUGAR, U.S. SENATOR FROM THE STATE OF INDIANA

Senator LUGAR. Thank you very much, Mr. Chairman, Senator Dole, distinguished members of the subcommittee. It's a very real pleasure to be here with my friend, Sam Nunn.

The proliferation of weapons of mass destruction (WMD) was, and remains, the number one national security priority facing the United States, and the international community. Fifteen years ago, Sam Nunn and I determined that our Government had to address the threats posed by the dissolution of the Soviet Union. As political and military leaders backed away from a Cold War posture, the arsenals they had developed to threaten and deter each other remained capable of killing the entire American population, and rendering our country a wasteland.

After the fall of the Soviet Union, the new nations of Ukraine, Belarus, and Kazakhstan emerged as the third-, fourth-, and eighth-largest nuclear powers in the world. Amidst disarray in the Soviet political system, and threats from Moscow, Kiev, Minsk and Almaty, debated whether they should remain nuclear powers, or abandon the costly and dangerous Soviet-made weapons system.

Sam and I challenged the United States, and our former enemies, to work together on a programmatic response to the threat. The Nunn-Lugar Program was the answer. The program helped convince the three new nuclear powers to remove all of their nuclear weapons from their territories. In addition, it became the primary tool to which the United States would work with Russia, to destroy its mass of nuclear, chemical, and biological warfare capacity.

I have with me today the Nunn-Lugar scorecard, which is off to my right. My office systematically tracks the elimination of each

warhead, missile, bomber, and submarine. To date, the program has destroyed more weapons than the combined arsenals of the United Kingdom, France, and China. The successes notated on these charts were never a foregone conclusion. Even after 15 years, creativity and constant vigilance are required to ensure that the Nunn-Lugar Program is not encumbered by bureaucratic obstacles, starved by inadequate funding, or undercut by political disagreements.

Through the ups and downs of the U.S.-Russian relationship, the Nunn-Lugar Program has been a constant. Today, while bilateral relations are strained in other areas, the program continues its important mission. But we still have a lot of work to do in the former Soviet Union.

Mr. Chairman, Sam and I could relate story after story accumulated over 15 years as we watched the progress of safeguarding and destroying these weapons proceed. But, these successful efforts still face two challenges. First, we continue to complicate our own efforts to destroy WMD through self-imposed bureaucratic red tape. Second, more resources are needed to capitalize on opportunities to advance the threat reduction process.

In 1991, concerns surrounding Russian intent led some Members of Congress to include in the original Nunn-Lugar legislation a requirement that the President certify annually that each recipient is "committed to" meeting six conditions. While well-intentioned, these certification requirements have sometimes delayed or complicated efforts to destroy WMD. In some years, more than half the fiscal year passed before the certification process was completed for that year.

This restricted Nunn-Lugar funds and delayed some weapons dismantlement projects for months. The certifications have also wasted hundreds of man-hours. Instead of interdicting WMD shipments, or identifying the next A.Q. Khan, our nonproliferation experts spend their time assembling certification, or waiver, determinations.

The certification requirements are counter-intuitive because they imply that the value of Nunn-Lugar activities diminishes when our differences with Moscow are amplified. In my judgment, the opposite is true. The benefits of verifiable destruction of WMD in Russia and of steady Nunn-Lugar contacts become even more valuable when other aspects of the U.S.-Russian relationship are experiencing friction. The bottom line is that safeguarding and eliminating WMD in cooperation with a willing government will almost always be in the national security interests of the United States and the burden of proof should be on those who believe otherwise.

The Senate agrees with this proposition. In 2005, the Senate approved an amendment that I offered to eliminate these certification requirements by a 78–19 vote. Last year, the Senate adopted a similar amendment by unanimous consent. Unfortunately, these provisions were not included in the relevant conference agreements. I'm pleased that Secretary Rice and National Security Advisor Hadley have endorsed my efforts. I have, again, introduced this legislation, and urged the Armed Services Committee to adopt it and serve as a strong advocate during conference with the House.

The second major impediment to Nunn-Lugar Program realizing its full potential is money. While not the subject of as many cinematic thrillers, the threat posed by proliferation of deadly pathogens rivals the more popularized "loose nuke" threat. A large number of pathogens and disease strains remain scattered in various locations, often with poor security.

Without a substantial funding increase, important biological projects will go unfunded, and dangerous pathogens such as anthrax, plague, smallpox, hemorrhagic fever, and avian influenza will be left unprotected and vulnerable to theft or diversion.

I've written to Chairman Levin and Senator McCain urging them to add $100 million to the program's budget to respond to these threats. With these funds, we could begin projects in seven additional countries. Under the current funding request, no work will get underway in those countries for years. A $100 million investment is a small amount when compared to the deaths and economic costs that would result from a biological weapons attack, pathogen outbreak or disease pandemic.

Mr. Chairman, while the program continues its important work addressing threats to the former Soviet Union, new challenges are emerging. The world has watched closely as the Six-Party Talks on North Korea's nuclear weapons program have proceeded. Ambassador Chris Hill still has difficult diplomatic spade work ahead, but we must begin to plan for the next step. If negotiations yield agreement with Pyongyang to eliminate its WMD and their means of delivery, the Nunn-Lugar Program has ready expertise to do this work. It will not be the only program employed, but it's a unique tool that may be available to the President.

In 2003, Congress approved and the President signed the Nunn-Lugar Expansion Act. It authorized $50 million in Nunn-Lugar funding to be used outside the former Soviet Union. This authority has already been put to the use in Albania, where a new government turned to the United States to help deal with the previous government's secret 16 tons of chemical weapons, stored under minimal security.

The Albanian experience reinforced that the Nunn-Lugar Program should have the flexibility to adjust to unforeseen contingencies. We should remove the $50 million limit on work outside the former Soviet Union. We should also give the Secretary of Defense the authority to implement Nunn-Lugar projects in difficult political and strategic environments without the risk that operations could be suspended because of unintended consequences of executive or legislative action.

Today the $30 million Non-proliferation and Disarmament fund at the Department of State is the only U.S. non-proliferation program that operates with so-called "notwithstanding authority." The Nunn-Lugar Programs should have similar flexibility. This authority would not preclude a congressional decision to adjust or limit the Nunn-Lugar Program's work and given causes. But, we should ensure that the potential for the work is not circumscribed unintentionally.

Mr. Chairman, the Nunn-Lugar Program track record is impressive. Sam and I have traveled with the Program's experts extensively. They are committed, as we are, to protecting this country.

We must continue to find ways to help them do their job better, and reduce the burdens we impose upon them.

Governments around the world are seeking our assistance with dangerous weapons issues. For example, the Program could provide assistance to nations in Southeast Asia to secure pathogens and viruses. The secret chemical stockpile in Albania will not be the last WMD that is discovered. We must be prepared to go anywhere in the world, at anytime, with the resources necessary to eliminate those threats.

Over the years, I've described Nunn-Lugar work to address threats posed by WMD as a window of opportunity. We never know how long that window will remain open. We should not let any opportunity pass to reduce the number of nuclear warheads, or to enhance our verification regimes. Our Government has the expertise and the capabilities to dramatically benefit this country's security. We must ensure that we have the political will and the resources to implement those programs devoted to these ends. I thank you very much.

[The prepared statement of Senator Lugar follows:]

PREPARED STATEMENT BY SENATOR RICHARD G. LUGAR

Mr. Chairman, Senator Dole, and members of the subcommittee, it is a pleasure to be here today with my good friend, Sam Nunn.

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THE FUTURE

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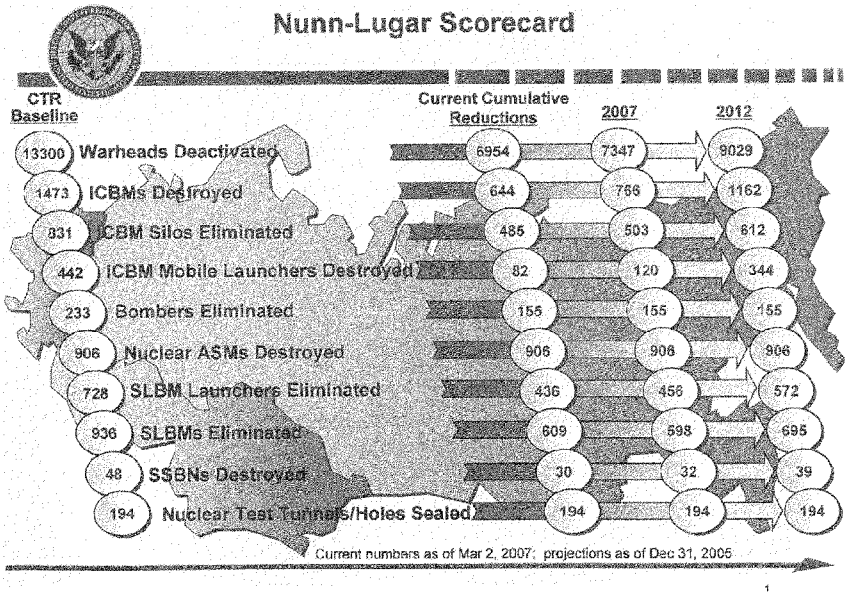
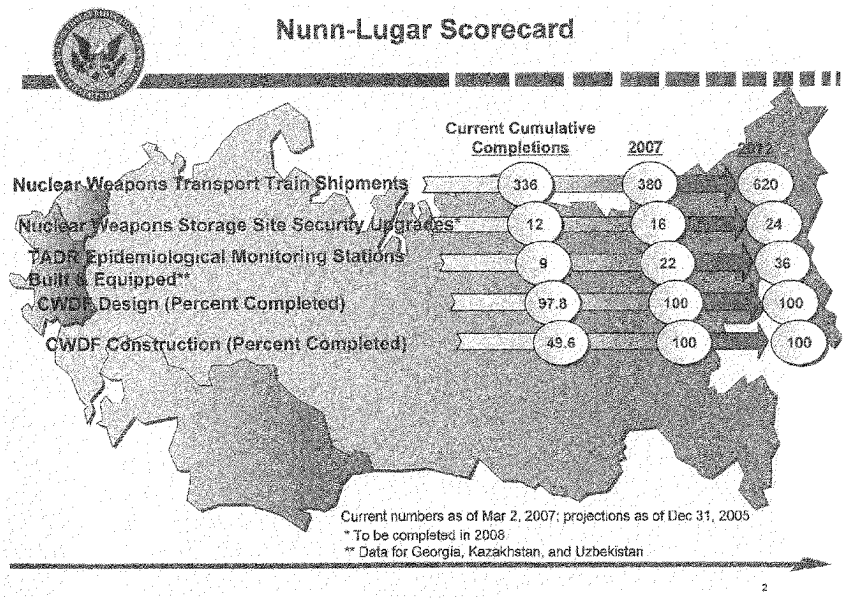
Thank you.





Senator REED. Thank you, Mr. Chairman and Senator Lugar. Senator Nunn, please?

STATEMENT OF HON. SAM NUNN, CO-CHAIRMAN, NUCLEAR THREAT INITIATIVE

Senator NUNN. Mr. Chairman, thank you. It's good to be back home, and to see old friends, and particularly to see the staff people who are still here, and the young lady sitting in back of you, Madelyn Creedon, is one of the best. It's very good to see Madelyn.

It's also great to be able to see here and I didn't know he was coming, Jim Reed. We pass laws, but the people have to execute them. That's where the hard work comes in and Jim Reid has been one of those in charge of the Nunn-Lugar Program for a long time. Of course, we travel with him, we've gotten the benefit of his advice and counsel, and he has an excellent team of people.

Jim, I know that Senator Lugar joins me in thanking you and your group for getting out there and getting the job done.

It's great to be back again with colleagues, Senator Reed, Senator Dole, my old friend, Senator Warner, and my good friend from Georgia, Senator Chambliss.

Senator Nelson, it's good to be with you, and I hope you express my greetings and appreciation to all of the other members of the committee, as well as the subcommittee.

So, I'm honored to be here. I particularly want to endorse everything Senator Lugar said. I know he has to run in just a moment, but I want to emphasize the certification issue, and the fact that the very fundamental part of this program is, it's not foreign aid, it's in our security interest. The certification, as Senator Lugar said, is counter-intuitive, because it says, in effect, that if countries are on their good behavior, we'll help them, but when they're not

on their good behavior is probably when we need to attend to the problems even more urgently. So, this is not foreign aid, it's fundamental in the security interests of the United States, and that's an important point.

The other point I'd like to underscore that he made, was the importance of dangerous pathogens, the bio-threat. We haven't talked as much about that, that's been part of the Nunn-Lugar Program from the beginning. We haven't made nearly as much progress on that. The Russians' in my view and personal judgment, illegal behavior under the biological treaty during the Soviet Union days—they know more about the biological dangers than almost anyone, because they created a great deal of biological capability.

I think we have to have a breakthrough in that regard. We haven't had it yet. We don't get as much cooperation on bio as we need to get from Russia, but we need to help them in their country, in the former Soviet Union on the bio-threat. They need to be partners with the United States all over the world.

If you looked at the paper, Global Security Newswire, in the last 2 days, I don't know whether it was today or yesterday, Denmark just came up with an internal report, this is not part of the former Soviet Union, this is of course, a Western Democracy, and a great country. That said, a very large number of their labs handling very dangerous pathogens were basically insecure.

I'm afraid we'd find that right here in this country, too. I think it's a major, major problem, and one of these days it's going to hit us, and we're going to have another report that says the failure of anticipation, and the failure of imagination. So, I hope that the words of Senator Lugar on the bio-threat will be given careful attention.

In 1948, at the dawn of the nuclear age, General Omar Bradley said, and I'm quoting him, "The world has achieved brilliance without wisdom, power without conscience. Ours is a world of nuclear giants and ethical infants. We know more about war than we know about peace, more about killing than we know about living."

If he were alive today, I believe it would surprise General Bradley to know that we've made it 62 years since Hiroshima and Nagasaki without the use of a nuclear weapon. But the fact that we have made it this far should not give us any false sense of comfort, or confidence, that we're going to make it the next 62 years, or maybe even the next 20 years.

We have important efforts underway, without any doubt, we have some successes—Senator Lugar has made that very clear here this morning—including the Nunn-Lugar Threat Reduction Programs, the Global Threat Reduction Initiative (GTRI), the G8 Global Partnership—where the words are perfect, the implementation, in my view, is sadly lacking—the Global Initiative to Combat Nuclear Terrorism, or the Proliferation Security Initiative (PSI), the rollback of Libya's nuclear program, which was very important, and U.N. Resolution 1540, which has all the right words, but we have a long, long way on a global basis, to have much implementation of Resolution 1540.

President Bush has said we must do everything in our power to keep nuclear, chemical, and biological weapons out of the hands of terrorists. The 9/11 Commission called for a maximum effort to pre-

vent terrorists from acquiring WMD, but, at the end of 2005, gave the Government a D for its progress in this area. In my view, the risk of a nuclear weapon today is growing, not receding.

Countries like North Korea, and Iran, as we well know, are pushing international will to the brink by developing nuclear weapons technology, and in the case of North Korea, are unfortunately developing nuclear weapons themselves. A number of additional countries are considering developing the capacity to enrich uranium, to use as fuel for nuclear energy.

I consider this a real tipping point. This gives those countries—if they do it—greater capacity to move quickly to a nuclear weapon program if they choose to do so. Now, it's perfectly legitimate to enrich. But, the difficulty is, under today's regimes, we cannot tell when someone moves from low enrichment to high enrichment, and that's the difference between making electricity and making deadly weapons.

Stockpiles of loosely-guarded nuclear weapons materials are scattered around the world, offering inviting targets for theft or sale. We are working very hard on this, but we have a long way to go. In my view, if you look at the threat and you look at the response, and you look at the danger and you look at the response, I think the threat is outrunning our response.

Because of an explosion of knowledge and information throughout the world, the know-how and expertise to build nuclear weapons and biological weapons is far more available. Terrorists are seeking nuclear weapons for the same reason that terrorists seized airplanes on September 11—to use them to inflict on the world the greatest possible human suffering, economic loss and geo-political chaos.

Some nations that have had nuclear weapons since the signing of the Nonproliferation Treaty (NPT) are now increasing their reliance on nuclear weapons. Not exactly an example we need in the nonproliferation quest.

Some nations that have gained nuclear weapons outside the Nuclear NPT seek to legitimize their nuclear status.

Now, there is good news. The good news is that the potential for conflict between the major powers, and in particular, between the United States and Russia, has dramatically declined. Though both countries, for strange reasons to me, at least, seem reluctant to act on it, we do share many security concerns.

The bad news is that there still remains a potentially deadly nuclear threat between the United States and Russia. Both countries still deploy thousands of nuclear warheads on ballistic missiles that can hit their targets in less than 30 minutes—a short warning time, hair trigger, prompt-launch capability that increases the risk of an accidental, mistaken or unauthorized nuclear missile launch.

Mindful of these rising threats, and eroding confidence in deterrence as we've known it, recently George Shultz, Bill Perry, Henry Kissinger and I published an article in the Wall Street Journal, I believe it was early January. We believe that we've arrived at a dangerous tipping point in the nuclear era, and we advocate a strategy for improving America, security, American security, and global security. Both nuclear "have" nations, and "have not" nations must think anew, if we are to prevent a nuclear nightmare.

Whether the world recognizes it or not—and I don't think the world recognizes it—we are in a race between cooperation and catastrophe. Those of us who wrote and endorsed the Wall Street Journal piece—and there were a number of others, former Government officials who endorsed it—believe that in order to deal effectively with this new and dangerous era, the United States and the international community must embrace the vision of a world free of nuclear weapons, and pursue critical measures toward that goal.

We believe that without the bold vision, the actions will not be perceived as fair or urgent, and without the actions, the visions, of course, will not be perceived as realistic or possible.

Mr. Chairman, Senator Dole, Senator Warner, members of the subcommittee, we recommend the following, specific steps. What Senator Lugar has already talked about is number one on our list—we must secure nuclear weapons and materials around the globe to the highest possible standards, and this requires tremendous leadership, tremendous cooperation, and this goes far beyond the former Soviet Union.

Number two, we should eliminate short-range tactical nuclear weapons, the bombs most likely to be targeted for theft or purchase by terrorists. In my view, this is not going to be easy. I think we should start with quiet discussions with Russia about transparency and accountability of these weapons, between the United States and Russia. If we don't know how many there are—and I think we do in our inventory, but if they don't—and I'm not sure about that—then they don't know when one's missing. These are the weapons that would be a terrorist's dream.

Number three, nuclear weapons should be reduced substantially in all states that possess them, and of course, we are embarked on that, to a degree, in the Moscow Treaty.

Number four, we must get control of the uranium enrichment process for civil nuclear fuel production, halt the production of fissile material for weapons, and phase out the use of highly-enriched uranium (HEU) in civil commerce all over the globe. That latter item will take time, but we need to embark on the journey. Last September in Vienna, on behalf of our Foundation, the Nuclear Threat Initiative (NTI), and with the support of Warren Buffett, I advanced a proposal for establishing an international fuel bank.

Legislation has been introduced in Congress in support of this concept on the House side, by Congressman Lantos, and I hope the committee, the members of this committee will take a look at it, and encourage it and support that. Because, it's certainly not the overall answer, but it is a major part of the answer of a backup fuel bank so that we can say to countries all over the globe, "You're going to have assurance of fuel supply. If everything else fails, the International Atomic Energy Association (IAEA) will have an international fund of fuel, low-enriched uranium (LEU), and you will be eligible for that if you are not enriching, and if you are not reprocessing." So this one, I think, is very important. It has to be joined with other tiers of guarantees, but it is the last, best hope.

Number five, we must redouble efforts to resolve regional confrontations and conflicts. Now, as this committee well knows, this will not be an easy task, but it is an essential one if we are to stem

the incentive for acquiring nuclear weapons in places like the Middle East, Southwest Asia, as well as the Korean Peninsula. These are not simply regional conflicts, they create tensions and confrontations that shape global world security, and America has a huge stake in each of those regions.

Number six, we should work to bring the Comprehensive Test Ban Treaty (CTBT) into force, in the United States and in other key states. I would urge the committee to go back and take a look at the reasons that people opposed that ratification back a number of years ago, and review those, and look at what's happened since then, look at the stewardship program, look at the simulation capabilities, look at the technology that we can now use to ease some of the concerns that were legitimate at the time that was debated. I believe that the report of the former Chairman of the Joint Chiefs of Staff, John Shalikashvili, a year or two after that was debated, I think that ought to be reviewed again by the committee, and by the Senate. That the safeguards he recommends as a roadmap to ratification should be updated and taken very seriously. I think that's very important in terms of the United States leadership in the world. When we don't ratify the CTBT, it's often hard to lead from a position of moral authority throughout the world. I know we have to deal with the problems, but I think they can be dealt with.

I would note, Mr. Chairman, that former President Gorbachev, who recently published his own essay in support of the Shultz, Kissinger, Perry, Nunn essay in the Wall Street Journal, has advocated ratification of the CTBT, and removing nuclear weapons from hair trigger status as two crucial steps that should be taken without delay by the United States and Russia, and other members of the nuclear club. I think the world should take President Gorbachev up on his challenge.

The United States and Russia should also, in my view, move to change the Cold War posture of their deployed nuclear weapons to greatly increase warning time in both countries, and ease our fingers away from the nuclear trigger.

Mr. Chairman, we could talk a long time about this, but I just pose this simple—but, I think, pretty important question—is it in the United States national security interest for the President of Russia to have only a few minutes to decide whether to fire his nuclear weapons, or lose them in response to what could be a false warning? Is that in our interest? I think the answer is clearly, no. I would hope that this question would be asked, in reverse, in Russia, and that we would begin to ask it together.

Last, but perhaps, most importantly, I believe that we must enhance our verification capabilities—policies as well as technical agreements, once again restoring and elevating President Reagan's maxim, "Trust but verify" as an essential component of our National security policy. In my view, we should put at least as much effort into verification as we do into missile defense. I'm not talking about necessarily money, I'm talking about effort, policies, procedures, thoughts and guidelines. It's going to take a lot of verification to deal, not only with the nuclear, not only with something like a Fissile Material Cutoff Treaty if we ever get one, but also going back and finding out how we can do a lot better job of

verifying the biological treaty, which has no verification, and which may be—in the long run, one of our greatest dangers.

It's going to require U.S. leadership. Accomplishing all of these steps is going to require a great deal of cooperation, and it's going to require, not only leadership from the nuclear nations, but also those nations that do not have nuclear weapons. The bottom line, I believe, is that we need a strategic reassessment of the roles and purposes of nuclear weapons in the 21st century, and an urgent change in direction with both the vision and the steps. This new direction will require Presidential leadership, and a consensus judgment in Congress to sustain it. As this subcommittee well understands, the discussion is just beginning.

In closing, Mr. Chairman, I believe that the vision and the actions must go together. We cannot defend America without taking these actions, and I think if you look at the list, you will agree with, I believe, all of them, but at least most of them. We cannot take these actions without the cooperation of other nations. We cannot get the cooperation of other nations without embracing the vision of a world free of nuclear weapons, which every President from Richard Nixon to George W. Bush has reaffirmed through our Nation's agreement to Article VI of the NPT, which is the law of the land.

This cannot happen overnight. It will take a long process, it has to be done in stages. The United States must have its nuclear weapons as long as other nations do, no doubt about that. But we will be safer and the world will be safer if we are working toward the goal of de-emphasizing nuclear weapons, and ultimately ridding our world of them.

Nearly 20 years ago, Ronald Reagan was asked to identify the most pressing need in international relations. In response, President Reagan asked his audience to imagine that, quoting him, "All of us discovered that we were threatened by power from outer space, from another planet." The President then asked, quoting again, "Wouldn't we come together to fight that particular threat?" After letting that image sink in for a moment, which he was so good at doing, President Reagan came to his point, "We now have a weapon that can destroy the world. Why don't we recognize that threat more clearly, and then come together with one aim—how safely, sanely and quickly can we rid the world of this threat to our civilization and our existence?"

Mr. Chairman, Senator Dole, Senator Warner, Senator Levin, and members of the committee, if we want a safer world for our children and grandchildren, I think our generation must begin to answer President Reagan's question.

Thank you very much.

[The prepared statement of Senator Nunn follows:]

PREPARED STATEMENT BY FORMER SENATOR SAM NUNN

Mr. Chairman, I commend you, Senator Dole, and your subcommittee for your efforts to stimulate a thoughtful discussion over how we can improve our security and reduce nuclear threats to our Nation and the world. I also want to thank Senators Levin, Warner, McCain, Byrd, and Kennedy and my other former colleagues for their important work in this area over many years on the Armed Services Committee. I especially want to thank my friend, Senator Lugar, who is providing outstanding leadership in the Senate to reduce nuclear dangers, and I am honored to

be with him today. I thank the subcommittee for the opportunity to discuss with you today the issue of U.S. nuclear weapons policy.

In 1948, at the dawn of the nuclear age, General Omar Bradley said, "The world has achieved brilliance without wisdom, power without conscience. Ours is a world of nuclear giants and ethical infants. We know more about war than we know about peace, more about killing than we know about living."

If he were alive today, it might surprise General Bradley to know that we have made it 62 years since Hiroshima and Nagasaki without the use of a nuclear weapon. But that fact should not give us a false sense of confidence that we will make it the next 62, or even the next 20 years.

We have important efforts underway and some successes—including the Nunn-Lugar Threat Reduction Programs, the Global Threat Reduction Initiative, the G8 Global Partnership, the Global Initiative to Combat Nuclear Terrorism, the PSI, the rollback of Libya's nuclear program and U.N. Resolution 1540.

President Bush has said we should do "everything in our power" to keep nuclear, chemical, and biological weapons out of terrorist hands. The 9/11 Commission called for a "maximum effort" to prevent terrorists from acquiring weapons of mass destruction, but at the end of 2005 gave the government a "D" for its progress in this area. In my view, the risk of a nuclear weapon being used today is growing, not receding.

- Countries like North Korea and Iran are pushing international will to the brink by developing nuclear weapons technology and—in the case of North Korea—nuclear weapons.
- A number of additional countries are considering developing the capacity to enrich uranium to use as fuel for nuclear energy—giving them greater capacity to move quickly to a nuclear weapons program if they choose to do so.
- Stockpiles of loosely guarded nuclear weapons materials are scattered around the world, offering inviting targets for theft or sale. We are working on this, but I believe that the threat is outrunning our response.
- Because of an explosion of knowledge and information throughout the world, the know-how and expertise to build nuclear weapons is far more available.
- Terrorists are seeking nuclear weapons for the same reasons terrorists seized airplanes on September 11—to use them to inflict on the world the greatest possible human suffering, economic loss, and geopolitical chaos.
- Some nations that have had nuclear weapons since the signing of the Nuclear Nonproliferation Treaty (NPT) are increasing their reliance on nuclear weapons.
- Some nations that have gained nuclear weapons outside of the Nuclear NPT seek to legitimize their nuclear status.
- The good news is that the potential for conflict between the major powers, and in particular between the United States and Russia, has dramatically declined. Though both countries seem reluctant to act on it, we share many security concerns. The bad news is that there still remains a potentially deadly nuclear threat: both countries still deploy thousands of nuclear warheads on ballistic missiles that can hit their targets in less than 30 minutes—a short warning time, "hair trigger" prompt launch capability that increases the risk of an accidental, mistaken or unauthorized nuclear missile launch.

Mindful of these rising threats and the eroding confidence in deterrence as we have known it, George Shultz, Bill Perry, Henry Kissinger, and I published an article in January in the Wall Street Journal. We believe that we have arrived at a dangerous tipping point in the nuclear era, and we advocate a strategy for improving American security and global security.

Both nuclear "have" and "have not" states must think anew if we are to prevent a nuclear nightmare. Whether the world recognizes it or not—we are in a race between cooperation and catastrophe.

Those of us who wrote and endorsed the Wall Street Journal piece believe that in order to deal effectively with this new and dangerous era, the United States and the international community must embrace the vision of a world free of nuclear weapons and pursue crucial measures toward achieving that goal. We believe that without the bold vision, the actions will not be perceived as fair or urgent. Without the actions, the vision will not be perceived as realistic or possible.

We recommend actions by the five nuclear weapon states that are parties to the Nuclear NPT; actions by those states with nuclear weapons outside the NPT; and

actions by nations who may have the capability—although hopefully not the intent today—to produce nuclear materials or nuclear bombs.

Mr. Chairman, Senator Dole, and members of the committee, we recommend the following specific steps:

1. We must secure nuclear weapons and materials around the world to the highest standards;

2. We should eliminate short-range "tactical" nuclear weapons, the bombs most likely to be targeted for theft or purchase by terrorists. In my view, we should start with transparency and accountability of these weapons between the United States and Russia.

3. Nuclear weapons should be reduced substantially in all states that possess them.

4. We must get control of the uranium enrichment process for civil nuclear fuel production, halt the production of fissile material for weapons and phase out the use of highly enriched uranium in civil commerce.

a. Last September in Vienna, on behalf of the Nuclear Threat Initiative and with the support of Warren Buffett, I advanced a proposal for establishing an international fuel bank. Legislation has been introduced in Congress to support the establishment of such a bank, which I hope members of this committee will encourage and support.

5. We must redouble efforts to resolve regional confrontations and conflicts. As this committee well knows, this will not be an easy task, but it is an essential one if we are to stem the incentives for acquiring nuclear weapons in places like the Middle East, southwest Asia and the Korean peninsula. These are not simply regional conflicts. They create tensions and confrontations that shape world security.

6. We should work to bring the Comprehensive Test Ban Treaty into force—in the United States and in other key states. I believe that we should use the report by former Chairman of the Joint Chiefs of Staff John Shalikashvili and the safeguards that he recommends as a roadmap to ratification here at home.

a. I would note that former President Gorbachev, who has recently published his own essay in support of our Wall Street Journal piece, has advocated ratification of the CTBT and removing nuclear weapons from hair trigger alert as two crucial steps that should be taken without delay by members of the nuclear club. I believe that the world should take up President Gorbachev's challenge.

7. The United States and Russia should move to change the Cold War posture of their deployed nuclear weapons to greatly increase warning time in both countries and ease our fingers away from the nuclear trigger.

a. To accomplish this step, I urge the two Presidents to order the military and defense officials of each country to present to them a set of options to increase warning time on both sides. I believe that a front burner option should be to remove all nuclear weapons from hair trigger status, which would greatly increase warning time and reduce the danger of an accidental or unauthorized missile launch.

b. These officials should jointly determine which threats justify keeping thousands of nuclear weapons on hair trigger status, and then recommend steps to eliminate those threats and thus end the justification for deploying nuclear forces in this posture. Other prudent ways to increase warning time for both countries should be developed by our defense leaders and presented for consideration.

c. The Presidents, in close consultation with Congress and the Duma, should then jointly adopt an approach and a timetable to get the job done, and challenge other nuclear nations to follow this lead.

d. This increased warning time would improve the security of the United States and the security of Russia, and would set a powerful example for the world.

e. Chairman Reed, Senator Dole, and members of the committee, each day we should ask ourselves: "Is it in the United States' national security interest for the President of Russia to have only a few minutes to decide whether to fire his nuclear weapons or lose them in response to what could be a false warning?" I would hope that this question would be asked in reverse in Russia and that we would begin to ask it together.

8. I believe that we must enhance our verification capabilities, policies and agreements, once again restoring and elevating President Reagan's maxim of "trust but verify" as an essential component of our national security policy. In

my view, we should put at least as much effort into verification as we do into missile defense.

Mr. Chairman, Senator Dole, and members of the committee, accomplishing these steps will require intensive work with leaders of the countries in possession of nuclear weapons to turn the goal of a world without nuclear weapons into a joint enterprise. This will require U.S. leadership.

I believe that we need a strategic reassessment of the role and purposes of nuclear weapons in the 21st century and an urgent change in direction with both vision and steps. This new direction will require Presidential leadership and a consensus judgment in Congress to sustain it. As this subcommittee well understands, this discussion is just beginning.

In closing, I believe that the vision and actions must go together. We cannot defend America without taking these actions; we cannot take these actions without the cooperation of other nations; we cannot get the cooperation of other nations without embracing the vision of a world free of nuclear weapons—which every president from Richard Nixon to George W. Bush has reaffirmed through our Nation's commitment to Article VI of the NPT.

This cannot happen overnight. It will be a long process, done in stages. The United States must have its nuclear weapons as long as any other nations do. But we will be safer, and the world will be safer, if we are working toward the goal of deemphasizing nuclear weapons and ultimately ridding our world of them.

Nearly 20 years ago, Ronald Reagan was asked to identify the most pressing need in international relations. In response, President Reagan asked his audience to imagine that "all of us discovered that we were threatened by a power from outer space—from another planet." The President then asked: "Wouldn't we come together to fight that particular threat?" After letting that image sink in for a moment, President Reagan came to his point: "We now have a weapon that can destroy the world—why don't we recognize that threat more clearly and then come together with one aim in mind: How safely, sanely, and quickly can we rid the world of this threat to our civilization and our existence."

Mr. Chairman, Senator Dole, and members of the committee: If we want a safer world for our children and grandchildren, our generation must answer President Reagan's question.

Senator REED. Thank you very much, Senator Nunn.

We've been joined, as you pointed out, by Senator Levin, Senator Warner, and Senator Collins. We'd like to do about 6-minute rounds of questioning.

So, let me first thank you and Senator Lugar for your very compelling testimony, but not only that, for your work over several decades now, which ranks—I believe, along with the Marshall Plan—as laying out a vision for this country, based upon not just altruism, but reality and realism, to help make this a much more secure and safer world. So thank you for your continued interest.

I will go ahead and begin the questioning, and then turn to my colleague, Senator Dole.

Currently, you and Senator Lugar both have been able to inspect the chemical weapons destruction facility in Russia, that we're building, and it appears that the Department of Defense (DOD) is going to curtail their expenditures to about $1.04 billion, essentially, give the Russians $200 million more and say, "finish it, and run it." My question, Senator Lugar and Senator Nunn is, are those, in your mind, will that be an adequate way to resolve the situation, to finish the facility and to continue to do what we want to do, which is to have them actively destroy their chemical weapons?

[The information referred to follows:]

I have visited the Chemical Weapons Destruction Facility at Shchuchye on three occasions. On one occasion, as Senator Nunn described in his testimony, he and I toured the chemical weapons stockpile stored at a nearby, military base. The facility is made up of 14 old wooden warehouses. Some have broken windows covered over with chicken wire. The high fence and the military guards are the only hint of what

is inside—one of the world's largest stockpiles of deadly nerve gas, nearly 2 million easily portable artillery shells and missile warheads filled with lethal sarin, soman, and VX. It's enough to kill the world's population 20 times over.

These chemical weapons, part of a massive Soviet-era arsenal that totals more than 40,000 metric tons, must be eliminated before they fall into the hands of terrorists. The U.S. and Russia, along with 153 other countries, approved the Chemical Weapons Convention (CWC), each country committed to ban the production of chemical weapons and destroy our huge stockpiles that were built during the Cold War. It is clearer than ever that our own national security is bolstered by a vigorous international campaign to contain and destroy all chemical weapons stockpiles.

With the world threatened by global terrorists seeking weapons of mass destruction, it is hard to overstate how serious this problem is. A single 85mm artillery shell from Shchuchye can be concealed in a briefcase, but carries enough poison gas to kill up to 100,000 people. A disgruntled insider could smuggle one out, or a determined group of well-armed terrorists could penetrate the installation's defenses.

There is plenty of blame to go around for the delays we have encountered in destroying the chemical weapons munitions at Shchuchye. In the past, Moscow was unable to pay its share of destruction costs and was suspicious of providing information on its weapons programs. For 3 years, funds from the Nunn-Lugar Cooperative Threat Reduction program designated for Shchuchye were blocked by some in Congress who asserted that Russia's failure to comply with its CWC obligations requires the suspension of joint chemical weapons destruction efforts.

Although Congress granted the president temporary waiver authority to get the money flowing again, the United Slates lost valuable time on an urgent project. We are in a race to rid the world of these dreadful weapons before terrorists get their hands on them, and we shouldn't let self-imposed bureaucratic hassles slow us down. Some in Congress and in the administration ask why we should spend money to clean up the Russian mess: 'They made their bed, now they can lie in it.' The trouble is, in the meantime terrorists could steal weapons of mass destruction, and use them against our Armed Forces, the United States, or our allies.

Despite the strong support from the President and the administration, Congress continues to place six conditions on U.S. assistance to the chemical weapons destruction program at Shchuchye. Current law requires that the President certify that Russia has met each of these six conditions. Absent such a certification, funds cannot be obligated and cannot be expended until or unless the Administration certifies that cooperation is ongoing or a waiver is put in place. In a number of circumstances, they cannot certify that these conditions are being met and consequently, they have to request waiver authority so that the conditions can be waived and funding can go forward. As I indicated in my testimony these certification requirements need to be eliminated. While well intentioned, these conditions delay and complicate efforts to destroy weapons of mass destruction. As recently as 2003, Shchuchye funding was not available for expenditure until more than half of the fiscal year had passed before the bureaucratic process was concluded. None of these certifications justifies stopping the destruction of the stockpile at Shchuchye. We must eliminate, not preserve, mechanisms that slow down our work.

During the past 2 years, our efforts at Shchuchye have been frustrated by what I suspect is the intentional manipulation of the U.S. contracting process. In what is believed to be one of the final contracts, the U.S. Government, through our main contractor, the Parsons Company, has submitted two separate requests for proposals to install the destruction equipment in one of two destruction buildings. Unfortunately, despite our best intentions and meticulous cost analyses and evaluations none of the bids that have been received have been consistent with U.S. estimates. In each of the two subcontractor bidding processes, early estimates provided by some Russian companies were considered responsible and accurate. Unfortunately, each bidder on each occasion dramatically increased their proposed cost estimate days before the awarding of a contract. Nunn-Lugar staff from the Pentagon and the Defense Threat Reduction Agency suspect intentional and organized contract manipulation.

After the Nunn-Lugar Program's third such experience, the program decided to take a new path. The program is currently in negotiations with the Russian Government on a way forward. As Principal Deputy Assistant Secretary of Defense for Global Security Affairs, Joseph Benkert, testified earlier today the Pentagon expects "to amend the agreements and add the final contracts and funding to complete this project very soon."

Today the project at Shchuchye is approximately 50 percent complete, planning is more than 99 percent complete. I know that Senator Reed expressed concern about the direction this project will ultimately take. I am also concerned. My num-

ber one goal is to ensure that the weapons at Shchuchye are eliminated as quickly as possible. They pose a dangerous threat to U.S. and international security.

I had hoped that the project at Shchuchye could have been completed in the same contracting and oversight fashion that it started. Unfortunately this does not appear to be possible. I believe the United States must maintain a strong role in the process independently or through the Parsons Company. Transparency remains a critical component of the Nunn-Lugar Program. We must be able to prove to the American people that these investments are in US national security interests.

In sum, each of us shares the same goal and that is the elimination of a potential threat. I am hopeful that a solution will be worked out soon that will allow the facility at Shchuchye to get started destroying these dangerous weapons. I plan to visit Shchuchye this August, and will be happy to share with this committee my findings and thoughts about the future of the project.

Senator NUNN. I'm going to defer to Senator Lugar, and I assure you he could answer that question for the record in terms of the update, but my impression of that destruction facility is that it has required a great deal of investment, the Russians have put a good bit in it, we've put an enormous amount of money in it and it's extremely important.

The times I've visited the chemical weapons storage facility, basically you go in the buildings, you put on gas masks, you go in and you see these stacks, as high as this roof, almost as high as this ceiling, here, of one artillery tube after another, full of chemical weapons. We had a mathematician, Ash Carter, with us when we visited, and he computed—I'll assume he was correct—we had enough, they had enough chemical weapons in that facility to kill everybody on the face of the Earth three or four times over, if it was disseminated in an efficient way. Of course, it wouldn't be, chemicals aren't, but that shows you the magnitude—each one of those artillery tubes—and they would fit in a briefcase—could basically kill thousands and thousands and thousands of people.

The other thing that impresses you is, there are holes in the roof. People could actually climb in those buildings. Unless you're suicidal, it wouldn't make much sense, unless you're trying to steal them, but that's the problem. I was not at all satisfied with the security there, though it's been dramatically improved, with our help, but there's also a time problem, because the land is very wet, and it is, in effect, gradually sinking. So, I think there's some urgency in getting rid of those. The thing is, Mr. Chairman, I'd have to be updated on the program to give you a precise answer of what Russia has done lately, but it's in—very much in Russia's interest to get these weapons destroyed.

We're working in good faith to get our chemical weapons destroyed. My impression of that program is, we're not quite on schedule—the Russians are way behind schedule but it's fundamentally in both countries' interest to get on with the job.

It's also in the interest of our European friends, and this is where some of these European nations in the G8 have signed up to help on chemical weapons destruction. So, I think it's an urgent priority, in terms of the exact procedure of how to deal with Russia and the obstacles right now, I'm going to have to defer to my colleague on that.

Senator REED. We'll follow up with Senator Lugar, thank you, Senator Nunn.

In recent articles, you've expressed your concern that the United States has lost leadership to address these nuclear issues and other

issues, and what must we do to regain this credibility and this leadership? Because, I think we all feel that without strong American leadership that this endeavor will not work.

Senator NUNN. I think we have to basically announce to the world that we are serious about Article VI of the Nonproliferation Treaty, reiterate what we are already doing with the Moscow Treaty, and the time schedule.

I believe one of the most profound statements we could make would be to join with Russia in saying that we have a goal in the next few years of getting all of our weapons off hair trigger alert. There is no need—15 years after the Cold War—for both nations to be able to destroy each other within an hour or two. Is is right for the President of Russia to have only a few spare—a few very crucial minutes to decide whether a false warning is in play, or whether we really are attacking?

The condition of their satellites and radars have gone down since the Cold War, they're not as good with warning as they were. That's fundamentally against our interests, because we don't want them to make a mistake. So, getting weapons off of hair trigger alert, basically working with Russia on that, getting tactical nuclear weapons with some degree of accountability and transparency, and I'm sure that's not going to be made public by Russia for a long time, but I think we could exchange data on that.

Greatly accelerating the securing of nuclear materials all over the world, and getting Russia to be a partner, not just simply a supplicant for funds, but a partner, in not only the former Soviet Union, but elsewhere. Because there are over 40 countries that have enough HEU to make a weapon. Once that gets away from the source, Mr. Chairman, it's like a needle in a haystack—protecting at the source, securing at the source, and eventually destroying at the source, or in some facility near the source is the best way, and the most efficient way to deal with that.

So, all of those are, I think, important ways that we could lead. I also believe that if the Senate of the United States took a real lead in looking, again, at the CTBT it would be to our advantage. I think you'll find that some of those concerns we've already dealt with, that were legitimate back then. I think it's time for a fresh look, I think it would send a totally different signal to the world. The way I see it, the vision of getting rid of all nuclear weapons is a very high mountain, but I think we ought to have that vision.

I believe if we look at the scorecard now, we're not—we, being Russia, the United States, all the nuclear powers and the world, the big "we"—we're not heading up the mountain, we're heading down the mountain. I've listed a lot of those concerns. We have to turn around, we have to show the world that we're heading up the mountain, and that we need people to go with us. We have to look for trails that lead up, and some of the things I've mentioned, I think, do lead up that mountain, and we have to get other people to go with us.

That's a big job, but the stakes are the future of the world.

Senator REED. Thanks, Mr. Chairman.

One final question, Senator Nunn, that is, there's been some concern about the relevancy of the nuclear Nonproliferation Treaty (NPT) today, and I wonder if you have any quick thoughts about

changes in the NPT that would be helpful to make this climb up the hill?

Senator NUNN. Well, certainly the additional protocol that has been pushed by the IAEA and by the United States and others, would help on the inspections. But, when you look at countries like India and Pakistan and Israel that are not under the NPT; when you look at the NPT in terms of permitting fissile material to be made, but only to the low-enriched level, but you don't have the inspection regime to make sure it doesn't go from low-enriched to high-enriched; when you look at the number of countries that are now lining up, saying they are about to go into production of fissile material—last count I had, it was seven additional countries; when you look at Iran and North Korea—all of that means that we have to, I think, strengthen the NPT, but it can't be the only thing, it's not a strong enough foundation to, basically, carry this load. That's why this vision and these actions, we're painting a much broader picture that includes strengthening a NPT, but it is not in any way limited to that. It's much broader.

We have to have countries like India and Pakistan and Israel participating in this much broader vision, and in these steps. We have to have countries that don't have nuclear weapons, but have nuclear materials, and HEU—they have to be stewards that are just as conscientious about this material as we are about our weapons.

The way I view it, Mr. Chairman, we were diligent during the Cold War—we and the Russians—in making sure we did everything possible to be safe. We've made sure we didn't escalate conflicts when we could avoid them, and we never had a nuclear exchange, or even a war between the United States and the Soviet Union, and between the North Atlantic Treaty Organization (NATO) and the Warsaw Pact.

But, we've also been—in addition to diligent—we've been lucky. You look back at the number of instances we've had where it could have been Armageddon. The first time I visited NATO, I came to the conclusion that we were going to be faced with our commanders in NATO asking for release authority of their battlefield nuclear weapons at the very beginning of any conflict. That wasn't our official position, but that was what you found out when you talked to people at night, over dinner, and that would have been the President of the United States, if we had had a conflict in Europe, we would have been faced with a very quick decision about whether to use our battlefield nuclear weapons or whether to lose them.

So, we've been very lucky. You have to ask yourself, if you get 10, 15, 20 countries with nuclear capability, are they going to be as diligent, and lucky—all of us are going to be as diligent and lucky in the next years as we have been in the past years? I don't think so. I think the odds are very much against that. We don't have to just be diligent and good and lucky one time, we have to be diligent and good and lucky every time there's an incident. That's multiplied, I think, in many ways, much more than geometrically, when you get additional countries.

We're on the tipping point of having, not only Iran and North Korea, but a number of other countries that are moving to—under their legal right—to enrich uranium. When they get that enrich-

ment capability, and if we do not have a stronger inspection and verification regime, internationally, then you have a lot of potential nuclear powers that are lurking right around the corner. So, it's a concern that, I think, is shared by Shultz and Kissinger and Perry and a lot of other people that we really, I think, have to pay attention to.

Senator REED. Thank you very much, Senator Nunn.

Senator Dole.

Senator DOLE. Senator Nunn, when you first authorized the CTR Program back in 1992, you had the wisdom and the foresight to not only focus on elimination of WMD, but also to provide for helping scientists who might be tempted to sell their knowledge, their expertise, because of the difficult economic conditions at the time of the dissolution of the Soviet Union.

Now, I'm interested in how you see that aspect of the success of that aspect of the CTR Program? Also, I'm concerned today that the same situation may be occurring in Iraq. We have scientists there who have left the country, obviously, many scientists have worked on the chemical weapons program, prior to 1991, and I'm interested in your views as to what more we might possibly be doing there? The DOE had a small-scale program to help with employment for scientists in Iraq, but I understand that, because of security considerations, that has not progressed aggressively. Do you think that the United States, other members of the international community should be doing more in this respect? If you could just share your thoughts on this aspect of the CTR and how you see it applying to the Iraqi situation?

Senator NUNN. Senator Dole, I think you put your finger on the part of the Nunn-Lugar Program that has concerned me the most. We have done some very good things. The science and technology centers in Ukraine and Russia, I think, have employed thousands of scientists back in the early nineties, mid-nineties, and even late nineties, that otherwise would not have had employment. They had nuclear knowledge, but not employment, no way to feed their families. So, I think it's done an enormous amount of good.

But it has not been anywhere near complete, and it is a tremendous danger that a lot of those people could have gotten out of the net, and ended up in countries that would use that nuclear knowledge and paid them money for it.

We don't know what we don't know. I don't know what has happened. I don't know how many scientists have ended up in the wrong place, but I know that a lot less than there would have been without the Nunn-Lugar Program.

Now, what do we do now? What I've tried to do in my conversations on college campuses with research universities, is encourage those universities to reach out and employ these people around the globe who have this nuclear knowledge and may be going through tremendous stress, in terms of a country like Iraq, or back in the nineties, a country like Russia. I think our energy labs, such as Los Alamos, Lawrence Livermore, and others, could employ more of these, but we have to separate the security side of that, we have to be very conscious of the security side.

What I'm hoping is, we don't let the security on labs obscure the need for the labs to reach out to other scientists around the globe.

These labs are our home for the most knowledge and expertise, and these are the kind of people that can reach out to scientists around the globe. I think there ought to be a way we can handle security, by having our laboratories reach out, and cooperating with them on projects that are of peaceful intent, and making sure that those people have support from their colleagues, making sure they have meaningful occupations.

I think that's something the laboratories could be given, but it has to be separated from the security. If we get so paranoid about the security of the labs, though, that we close out that cooperation with people like the Russians, like the Chinese, and like the Iraqi scientists coming, or perhaps in the future, Iranians or North Koreans, then I think we'll be missing a great opportunity. Because these are the people, that if terrorist groups got weapons material, and they got hold of a couple of scientists like this, we'd have a very bad situation.

Senator DOLE. In your opening statement, you referred to your proposal for establishing an international nuclear fuel bank that would prevent proliferation, while still ensuring that there would be success with regard to civil nuclear power for countries that want it. Would you elaborate on your concept with regard to a fuel bank, and how it would work? I'm interested in whether your proposal has received support from the United States Government, and other key countries?

Senator NUNN. On the latter question, we discussed this very thoroughly with a number of people in the current administration, and we were encouraged by their response. It was not specifically endorsed as a governmental position, but the Department of State and the DOE were very complimentary of the proposal. There were speakers at the conference in Vienna, representing the U.S. Government right after I spoke and made the proposal to the international body, that basically had very warm words to say about it.

Of course, the challenge we put up, we basically said, "We'll put up $50 million if the world will match us with 2-to-1." So, we were saying that, we need $150 million to get it started, it will take more than that later on as the demand for nuclear power grows—and I'm for nuclear power, I think we have to have nuclear power in the world, but it has to be safe and secure—but as that demand grows, this fuel bank is going to have to grow.

This fuel bank is sort of the last insurance policy. There has to be a tier of guarantees of adequacy of fuel supply. First, the market itself, which so far, works pretty well. Second, the nuclear suppliers are coming or working towards an agreement where if one supplier defaulted, the others would step in and ensure the country that was needing nuclear fuel that they would have it. Third, the Russians have proposed a proposal that would have a nuclear fuel bank in their country with Russian fuel backup, in joint venture with Kazakhstan, our Government is talking to them.

So, the IAEA is trying to sort all of this out, and I visualize a tiered approach, where you have different steps and guarantees. Insurance companies could play a role in this, the commercial market could play a role in this. But, I think that our proposal, hopefully, will kick off that kind of discussion. Right now, I would say the status is that IAEA Director El Baradei and his staff are work-

ing very hard on this. They are having meetings with the Russians and the United States, our Government's involved, I would like to see our Government take a stronger leadership position than they have taken so far.

I would like to see the Lantos bill, or something like that, pushed in the Senate and the House, because that would be the United States matching—or a portion of the match—I don't think it ought to all be U.S., but I think it ought to be partially U.S.—I'd love to see the United States and Russia jointly step up and say, "We'll match the $50 million," and that would get it up to $150 million. We need more than $150 million, but that's, we thought, a start.

So, we gave a 2-year window, so we have another 16, 17 months to go, and I'm encouraged by the response thus far, but there are a lot of obstacles, and it's going to take a lot of leadership.

Senator DOLE. Thank you.

Thank you, Mr. Chairman.

Senator REED. Thank you very much, Senator Dole.

Senator Nelson.

Senator BEN NELSON. Thank you, Mr. Chairman.

Thank you, Senator Nunn for being here today, and thank Senator Lugar for his commitment to this very important project that's continued over the years.

I wonder, in light of the number of countries that are showing an interest in nuclear capabilities in one degree or another, if there's a level that you truly are comfortable with in having a nuclear response capability that would be appropriate as these other countries re-gain nuclear capability? In other words, as others are gaining in their knowledge, we have the risk of trying to convert them to not become nuclear powers, with the nuclear powers that are there, but if we are slow to succeed, or don't succeed—what level of risk are we at that we ought to be protecting ourselves against?

Senator NUNN. The United States and Russia have a force that is vastly superior to any other nuclear powers on earth, nobody else comes close to the United States and Russia, and Russia——

Senator BEN NELSON. But it's aging.

Senator NUNN. Yes, that's true, but we've had more tests than any other countries, too, by far, so our nuclear forces are more up-to-date in terms of calibrated with tests than almost any in the world. Maybe Russia has as much. So, I don't think we have a gap that's going to close any time soon.

I would defer to those of you who get classified briefings, because I haven't had one in quite awhile, but the Chinese for many years did not have their missile and their warheads matched. They had them in separate places. That's what I call, not having a hair trigger. What I hope is the United States and Russia, in that regard, would get more like China, before China gets more like we are.

Because, the more countries that have weapons that can be fired in 30 minutes, that means warning times are all-important. It means that decisionmaking by human beings becomes less and less relevant. Not irrelevant, but less and less relevant. When you have to decide something in 2 or 3 minutes, you have to rely on machines, in effect, you have to rely on computers. Now, human judg-

ment always has to be in here, but the more warning time we get, the better off we're going to be.

Even if you have a world that has nuclear weapons forever, it would be, in my view, that our goal with Russia ought to be to increase the warning time. Let's just assume—and I'm sure it's classified, I don't even remember what it is, the exact minutes, it doesn't matter—but let's assume that the President of the United States has about 10 minutes to make a decision. Let's assume that the Russian President has less than that, because they're more vulnerable to a first strike, by far now, than we are. Let's say he has 5 minutes. Can you imagine all of the things that have to happen in that 5-minute period for the two leaders to make those decisions? I mean, the deeper you get into this, in the classified sense, I can assure you, the more concern you're going to get.

Now, our people will say, "Yes, we have these safeguards, we have these safeguards, we have these safeguards." I urge you to go back and look at the Jeanne Kirkpatrick Commission, and what they discovered a few years ago. Senator Warner, you and I helped stimulate that report, because we went over and talked to Secretary Cheney, and he got them to do it. They found some—and I think it's classified—they found some stuff that had to be changed, let's put it that way. Alarming.

In an age of computers, in an age of hackers, in an age of systems being vulnerable, even some of the most—supposed—secure systems are vulnerable to interception, and even takeover. I think we ought to get this stuff off of automatic.

Now, our people will say, "We have this procedure, and this procedure and this procedure," but ask them the question—how about the Russians? How confident are you that their warning systems are going to be accurate? What are the chances of mistake? The most recent mistake I know about was in 1995, when we launched a satellite off of Norway, and we had given them notice. We had told them it was going to be launched—which we're supposed to do under the Risk Reduction Program, Senator Warner, that you and I helped create, back years ago in the Reagan administration. So, that notice was given, but they lost it. They didn't know it. So, when the satellite went up, they thought it was a U.S. missile coming. They went to a higher stage of alert, I'm told, than they did during the entire Cold War.

Now, they pulled it down, it didn't happen, but you multiply that by 7, 8, or 10 other countries out there, all of them having to be right every time—we have a dangerous world. At the very least, we ought to set an example of not having these things on hair trigger.

I'd also ask you to ask the question now, what is it now that requires us to be able to fire our weapons within 30 minutes? Ask them the question. What is the contingency that we need, whatever it is—again, I'm not, I haven't been briefed—but let's say 2,000 weapons? Why do we need 2,000 weapons fired in 30 minutes? Why wouldn't 2 hours do? What is it that's going to happen in that period of time?

But, the United States and Russia both have concerns about survivability. Russia has a lot more concern about survivability now. If it were up to me, if I were President of the United States, I would sit down with Mr. Putin, and I would say, "Let's get our two

military commanders together. Let's get our top military people together. You tell—your people tell us what gives you so much concern that you have to be on hair trigger, and we'll tell you why we're on hair trigger, and let's start working these problems, so we don't have to be able to fire that rapidly."

I think it's absurd, 15 years after the Cold War that we still are in this posture. I think it is absolutely absurd that the United States existence as a Nation depends on the warning systems the Russians have concerns about being accurate. Their existence depends on us. I don't think this is the way we ought to go in the future.

Again, Director El Baradei said that it's very hard to get somebody not to start smoking, if you're chain-smoking yourself. So, we have to look at the example we're setting. I think that this example of hair trigger is particularly applicable, if we could ever bring ourselves to do it with Russia, and get, let's say, 2 hours warning time. That'd be a big change. It would be applicable to Pakistan and India. If there's anyplace that needs more warning time, it's there. But again, it's hard to lead, if we're still in the same posture that we were in during the Cold War.

Senator BEN NELSON. Thank you.

Thank you, Mr. Chairman.

Senator REED. Thanks, Senator Nelson.

Senator Chambliss.

Senator CHAMBLISS. Thank you, Mr. Chairman.

Sam, you've done more work in this area both as a public servant, as well as now, you work with the NTI in the private sector. You probably know more about the capabilities of those that possess nuclear weapons than anybody I can think of off the top of my head.

But, what concerns me is, that as much work as you've done, as much as you've highlighted the issue of the fact that there is absolutely no reason, either offensively or defensively for anybody to possess a nuclear weapon, the proliferation of nuclear weapons is growing rather than diminishing.

You've been gone from the Senate about 10 years now and when you left here there were "x" number of countries that had that capability, nuclear capability, and just look what's happened in the 10 years that you've been gone. Where have we, where have we failed as a leader on this issue? What have we not done right that we can improve on, and what incentives—you've delineated some there—but what other incentives are there out there that we can utilize to try to make sure that additional countries don't move down the direction that North Korea, India, Pakistan, Iran have moved and that folks act more like Libya?

Senator NUNN. Of course, that is a really good question and it, I don't want to take too much time in answering it, but if I give us—and this is totally subjective judgment, I couldn't give you an analytical backup for these judgments—but let me just run down, because I jotted down this morning what I call the "scorecard." If I looked at the scorecard of what we've done in the last 15 years, since Nunn-Lugar, and then look at what's missing, I think that may be one way to frame it.

On the Nunn-Lugar program in the former Soviet Union on the nuclear side, if 10 is a perfect score, I'd say we're at about five. So, we have a ways to go, but we've made progress. Maybe we're at six now.

On the GTRI, which is getting—this is a program started in 2004 by Secretary Abraham, which is a very good program, to get nuclear materials, HEU weapon-grade material, weapon-useable materials around the globe under security—and, there are 40 countries that have them, at least. But, on that one, I'd say we're somewhere between 3 and 4 out of 10 in terms of progress. We need to get other countries to join that.

On the bio-challenge in the former Soviet Union, I think we're about 2 out of 10. We have a long way to go. The Russians are not very cooperative on that.

In looking at the bio-problem worldwide and the lack of security, not only in other countries, but in our own country, on dangerous pathogens, I'd say we're about 1 out of 10. In looking at chemical destruction, somewhere around 4 out of 10.

On a very important subject, that Senator Lugar mentioned this morning, there were four nuclear countries after the breakup of the Soviet Union. They went from four to one—Kazakhstan, Ukraine, Belarus, all got rid of their weapons. I give us a 10 out of 10 on that one. That was a big, big accomplishment in the early 1990s.

The Global Partnership, the effort led by President Bush to get the G8 signed up to a non-proliferation agenda and a cooperative-type program, getting them to help on what we call the Nunn-Lugar Program. In terms of words on that one, I would give them something like a 10. They said all the right words, but in terms of deeds I give them a two. Most of the countries that signed up, except for us, have not put up anything like the money they said they would.

In terms of securing non-weapon grade material, but radiological material, I think we are about where we are on the biological materials. I think that is a huge job. A radiological weapon—unless we're better prepared for than we are right now, is going to have some of the psychological effect that a nuclear weapon would have even though it will not kill that many people. But, it could be a psychological blow, and a blow to the nuclear power industry too, which I happen to believe is very important now.

Then I would say that blending down the U.S.-Russia HEU—which has been one of the ways we helped the other countries get rid of their nuclear weapons in the 1990s—we're about halfway through that program and it's been very successful.

One of the things a lot of people don't realize, with that program—20 percent of our electricity in this country is nuclear power, 50 percent of the fuel burned to create that nuclear power in our nuclear power plants around this country comes from former warheads that have been dismantled, HEU, blended down to LEU. So, 1 out of 10 of these light bulbs right here, in this room, theoretically come from material that was aimed at us during the Cold War, until about 1990, 1992. So, we've made some progress.

In terms of what do we do now? I mean, obviously all those areas need work. I mean, the gaps need to be filled. We may never get to 10 in some of those, we're not going to have perfect risk reduc-

tion. But, we have to come as close to it as we possibly can. I think we need to increase the funding worldwide, which Senator Lugar mentioned. I think this needs to be not only nuclear, but bio needs to be a front-burner issue with the United States and Russia. At every Summit Conference this ought to be a very big percentage of the discussion between President Bush and President Putin. I don't think it has been, but it should be.

I think the United States and Russia need to be worldwide partners in not only the nuclear arena, but the bio arena. I think we still need to help them with money, but I think they need to step up to the plate with more of their own funds, and with leadership, and with time, and with expertise, in both the nuclear and biological area, around the world.

I think we need an international type Nunn-Lugar program with other countries stepping up. The G8 pledges were along that line, but the deeds are far from satisfactory. I think we need a full-time high-level individual that's in charge of this in the executive branch of Government. We had that in the original Nunn-Lugar proposal. It still hasn't been done through both Republican and Democratic administrations. There has to be a good reason for it, but they've never told me what it was in 15 years. We need somebody in charge, and we do not have that.

We need to, as Senator Lugar said this morning, eliminate the certification requirements. If this is in our security interest, we shouldn't have the certification. If it's not in our security interest, we shouldn't do it. I mean, that's what it amounts to. The DOD and DOE need more flexibility. Jim Reed and his team need to be able to shift funds in a way with full reporting to Congress, but they shouldn't be bound without being able to have flexibility. You have a lot of opportunities that come up, and they need to be able to do that. We need to get them out of the paperwork business—that's the certification—and get them full time out in the field.

Congress, in my view, needs to pay more attention to the GTRI, the DOE program. That's a vital part of our security efforts, just as important as what's being done at DOD. We need, I think, a whole tier of defense. I mean, I'm all for the PSI program, but I think security has to be the most fundamental and never letting the material get out of where it is now. Because once it gets out, the people who run the PSI program will tell you it's really, really hard to find it once it gets out.

I think the IAEA needs more funding not just from us, but I think the other countries need to do that. The security side of IAEA, when we first started our NTI Foundation, I don't know what their total budget was but, we gave them $1.5 million and we said match it. They got it matched 10 times over and the U.S. Government stepped up and helped. But, they're still woefully underfunded in terms of the job we expect them to do. Everybody points fingers and said, "They aren't doing this and that." Nobody ever looks at the budget they have, and it's woefully inadequate.

I think—and I'll stop in a minute—but I think we need global best practices on all power plants and all facilities that have weapon-grade material and handle them, commercial or otherwise. There are a lot of legitimate uses for this material, but we need to have, not only the weapon grade, but also the radiological material

secured. There needs to be a best practices peer-review kind of organization globally. A lot of that's going to be private sector, but I think the Government could help there.

Last but not least, as I discussed a moment ago, the international fuel bank that we have proposed, it needs a lot of help and a lot of work and I think the United States can take a real lead there. As I said, the State Department and the DOE have both been, I would say maybe not, enthused may be a little strong, but they've been, they've warmly received that proposal. Let's put it that way. I'd like for them to do more, but encouragement from Congress would help a great deal there.

So, Senator Chambliss, that's more than you asked for, but that's a list.

Senator CHAMBLISS. It's a big job and it's not going to end. We're not going to be able to wrap it up and say, "Boy, it's done, we're now safe." This is ongoing. This is going to be with us as long as we live. We're going to have to keep working this problem and the biological effort is where nuclear was 20 years ago.

The real difficult part of it is getting all these countries that we don't know are out there today who are going to develop nuclear weapons that you didn't——

Chairman LEVIN. Your last answer to Senator Chambliss's question was the kind of presentation which is so overwhelming in a way, your mastery of the subject. I only wish we could have you here full-time.

I think we're going to need your help in legislating those parts of this proposal, which need to be drafted, and there are some at least, which we could both fund and urge the, encourage the administration to do like the CTBT, which we could encourage them, at least, to present to us for the reasons that you give. We can't vote on ratification without a treaty in front of us, but we could at least prod the administration.

Have you, by the way, had any conversations with them about presenting the CTBT to us?

Senator NUNN. I have made speeches on it and had op-eds on it. I haven't had a direct conversation with them.

Chairman LEVIN. We will raise it with them again because——

Senator NUNN. I suspect the administration, even if there were people and I hope there are, that would want to move in that direction—I think there probably are some—they would probably feel that there would be too much hostility in the Senate, so as a chicken and egg and what goes first, I think there has to be some dialogue. I think if they were encouraged some of them might take a look at it.

The conditions have changed, I mean, we're in a different situation than we were when that was considered before. I think people who voted against it before and were very much against it could easily say to their constituents, "Things have changed, we're going to take another look."

Chairman LEVIN. Yes, they have changed and if the President got behind it, I think it would easily, not easily, but could be confirmed, or ratified.

Your idea on the international fuel bank, creative ideas always, what's the likelihood you think if we could put such a bank in place

that Iran could be reigned in, and use it instead of what they're doing?

Senator NUNN. There's an interesting possibility there. I haven't pretended that this is a solution to the uranium problem because there's so many complexities there and there's so much nationalism and it goes way back to the Shah, in terms of the program.

But, it could, it could apply and what Russia and Kazakhstan are working on, with the cooperation of the United States, of having a fuel bank in Russia and then this backup fuel bank might be combined with that. Because the backup fuel bank would be totally under IAEA control, not by any nation.

What these countries that don't have production of nuclear material capability, that want nuclear power, really fear is a political cut-off. So, the fact that Russia or the United States or any of the nuclear suppliers say, "We're going to guarantee it"—that's not sufficient because they say, "Look at the number of times you've cut off this country or that country, embargoed this, that, and the other," to the United States, in particular.

So, it has some of it, some backup has to be in international control, but a lot of it can be national with cross-guarantees. Some of it can be commercial and insurance. I'm encouraged that there's the possibility of getting that done. I think the U.S. has to lead and Russia has to lead for it to happen, but I think it could happen.

Chairman LEVIN. Would you recommend that we act legislatively either in terms of funding or otherwise to bring that into being? Should we take the initiative on that or should we——

Senator NUNN. I think it would be very helpful if the United States were to say to the IAEA, "We'll step up for "x" amount of the funding." Because we required specifically a $100 million match for the Buffett money, NTI money to be put up. If the United States would say, "We'll take $50 million of that, and we'll ask Russia to take $50 million." I think that would be enormously helpful.

Chairman LEVIN. Is that what the Lantos bill does? You mentioned the Lantos bill. Was that in relation to this particular——

Senator NUNN. That's right.

Chairman LEVIN. Is that what they do? They would authorize funding conditioned upon others putting up money?

Senator NUNN. That's my understanding. I'm going to study that bill. I haven't studied it yet, but Congressman Lantos has asked me to come over and visit with him and testify on that. I'll be doing that next month.

Chairman LEVIN. We'll also look into it. Any further thoughts on that, or any of these other subjects, you have would be——

Senator NUNN. Right.

Chairman LEVIN. Most welcome.

One of the NPT requirements is that the countries that have nuclear weapons, in good faith, get rid of their nuclear weapons. Should we be destroying weapons instead of warehousing them?

Senator NUNN. I believe we ought to get rid of the maximum number of weapons we can, and then I think we ought to, as a I mentioned a few minutes ago, I think we ought to define a nuclear-free world as the top of the mountain and recognize we're heading down, as Senator Chambliss said, we're not heading up.

We ought to try to turn around the direction, not only of our country, but the world and start finding trails that lead up the mountain. So, that perhaps one of these days, at some point in the future our children can at least see the top, or our grandchildren.

Chairman LEVIN. Would one of the ways to do that be to dismantle and destroy weapons, instead of to just simply put them in the stockpile or in the warehouses? I guess the Moscow treaty did?

Senator NUNN. That's right. Of course, I think it's important for that example, too. Because we may be able to safely store those weapons, but if other countries follow our example there, that just means there's a lot more inventory out there.

Chairman LEVIN. On the hair trigger issue, how do you address the submarine problem, number one?

Senator NUNN. The, what problem?

Chairman LEVIN. Having subs, I mean, how do you separate warheads from missiles in our subs?

Second, how do you deal with the issue, that if the time came you wanted to, you got nervous and wanted to marry them, mate them back together again, that that would be a destabilizing action? Third, if you'd comment on the proposal, if you're familiar with it, to have a conventional Trident, so that we'd be in a position where we'd have a Trident boat with either nuclear or conventional weapons—which would be confusing, in some of our minds at least—it would create uncertainty on the part of others as to whether a Trident was a conventional Trident weapon or a nuclear Trident weapon. Are you familiar with that proposal of the administration?

Senator NUNN. Yes, yes.

Chairman LEVIN. How does that, it's not quite a hair trigger issue, but it, nonetheless is a very destabilizing idea in the minds of many of us.

Senator NUNN. Well, let me start with the conventional Trident.

I've talked to General Cartwright about this a couple of times and I've gotten his case. He makes a very good case that he needs the capability of a prompt launch with conventional weapons for long distance. We have it with cruise missiles. We have one submarine, I believe Senator Warner, that has cruise missiles on it, one Trident, former Trident. But, when you do it, when you move to the prompt-launch missile, you're in another dimension, because you get into warning time and you get into what the Russians capability is. First of all, do they know the difference and will we be able to assure them, have we had enough discussions with them to assure them that when we launch a conventional Trident, and this doesn't have a nuclear weapon on it, and it may have the original azimuth heading that way, that it's not a nuclear weapon? I'm not aware that we've had that detailed discussion with them. Obviously, they're concerned about it.

Then I'd ask the question about Chinese warning. What are their warning systems? Can they tell the difference? What about France and Great Britain? What about Pakistan, India, ahd all the other nuclear nations? I think there's some profound questions here.

Then you have the question of, we're trying to discourage long-range missiles, anyway, under the Missile Technology Control Regime. What questions come up in regard to that? How much does

this compete with that goal? So, I'd say there are a lot of big questions on this.

If we were able, if we went a different atmosphere, if we were heading up the mountain, if we were moving in different direction and we had a lot more credibility and confidence around the globe in this overall, if we had a lot more cooperation, you might examine this in a different prism, but right now I would have to say that I think Congress put up a caution light last year. I would, right now, keep that caution light up.

Even though it's a paradox because, I say that even though the move from nuclear to conventional is the way we want to go. But long-range ballistic missiles are in a category of their own. I really do worry about warning systems and accuracy and mistakes.

Chairman LEVIN. Thank you.

Senator NUNN. The other two questions, Senator Levin. Let's say you take certain parts of missiles off so that you have more warning time or you separate the warheads. There are a lot of different ways you can do this and it needs very careful thought if you remove from hair trigger. It has to be discussed with Russia and it has to be military to military, in my view, discussion.

But, I don't think, I think the escalation problem is entirely manageable. I really believe that that is something that, it gives us concern, but we already have escalation problems. I mean, what do you do when you go to DEFCON–1? What do the people do, then? If it's going to take several hours to perform an escalation instead of several minutes, is that more danger than we have now? I don't think so. I know that the military has some concern about this and I think it has to be carefully considered, but I think that we can deal with that.

In terms of subs, that's a special challenge, but I would leave that to the technical experts and I would not, if I gave you my recall on some briefings I've had about how that can be done, it would be inadequate today. I would just say that that is a question that's serious, that is more difficult. I think some on-site type of verification would be necessary on all sides. But, I'm very concerned that we have to deal with this submarine problem anyway. Because Senator Warner, you and I worried about this a long time ago. I still worry about it. We have a proliferation of submarines, too. A proliferation of diesel submarines that are a lot quieter than they used to be. You have a proliferation of countries that could fire missiles off those submarines.

How good are the warning systems around the world in detecting if there was a submarine that pulled off Russia and launched—let's say hypothetically China did—launched a missile, nuclear weapon against a Russian city. Would they know it wasn't us? Would they know it wasn't the United States?

I think there's a lot of work that still needs to be done in that area. I think that a lot of military to military discussions need to take place, not just between the U.S. and Russia, but U.S., Russia, and China. India has subs now. Israel has subs now. I'm not sure about the nuclear capability of those, but those are questions that really need to be asked. So, the submarine issue is a real issue in terms of hair trigger, but it's even more profound in the other

arena of accurate detection and real time and not making a mistake.

Senator REED. Thank you very much, Senator Levin.

Senator Warner.

Senator WARNER. Thank you, Mr. Chairman.

This testimony this morning has been a very moving experience for me. I thank you for your personal references. We did work a lot together.

Do you realize that you're sitting at a spot in this room, where that table was, for breakfast that morning, that you—and you'd consulted with me the night or two before—we brought in the Senators on the committee and some others and showed them this plan, which eventually became Nunn-Lugar. Do you remember that?

Senator NUNN. I do.

Senator WARNER. Right where you're sitting now with one round table and we started at that breakfast.

Senator NUNN. I certainly do. I certainly do.

Senator WARNER. I can see their faces now when you said, and, here in the Cold War atmosphere, "We have to take money from our defense budget and give it to the Soviet Union to dismantle." That was a heavy task, but you skillfully managed that. This country, and indeed much of the world, has a great debt to you, personally, for you foresight and your tenacity to stick with this subject through these years. I thank you.

Senator NUNN. Thank you, Senator Warner. You've been a partner for a long time in many of these endeavors so I'm grateful to you, also.

Senator WARNER. Well, and then our good chairman down there, Senator Levin, are you listening to what I'm saying now or are you down there looking——

Chairman LEVIN. No, I'm listening to every word. [Laughter.]

There's a few, I must say my eyes are a bit moist, but I'm listening to——

Senator REED. I've somehow——

Senator NUNN. I hope you don't go along with Levin anymore than you used to go along with me, though.

Senator WARNER. I have a little trouble getting his attention now that he's the chairman.

But before we go to my questions, you dramatically said—and you amplified it in response to Senator Chambliss's very insightful question—if we had 8 or 10 nations with the nuclear capability, the fragility of the war, world today—because when we, set about, I say we and many others, many others set about working on these problems years ago—it was basically the United States and the Soviet Union. Throughout the Cold War there was a certain sense of confidence, both in the United States and the Soviet Union, that the most competent people were in the chain of decision should we ever reach a confrontation.

We do not have that today, with some of these companies, countries—notably Iran—a sense of confidence in their hierarchy, that they could carefully make a decision should they ever possess—and I hope they don't—this weapon.

It leads me, to the first question, you said in there we still need to help the Soviet Union financially. They're awash in oil money today. How are we going to, I'll fight hard as we have, always, to get the funds for the CTR program as it relates to Russia today. But their cash position is pretty strong. I'm just wondering, what are the arguments we use to take our cash to help them?

Senator NUNN. I think it gets harder as they become more prosperous. That's the bad news. The good news is as they get more prosperous they have the capability of doing more for themselves. So, I think it's a carefully calibrated weaning. I think they need to step up more. I think we need to gradually have less money, but I think the two of us need to step up our efforts together, not just in the former Soviet Union, but around the globe.

I hope Russia will step up on this fuel bank. We've talked to them a good bit about it. I went over there before we ever proposed it and met with some of the top Russian officials. They, like our Government, greeted it with interest and with a degree of receptivity, but less than a full, "Yes, we'll sign up."

I think your point is well made. But even if they have the funds, the question is, given all the challenges in Russia, and they still have mammoth challenges, mammoth economic problems, tremendous areas of their country that are in abject poverty, and you have to ask, "Would they give this as high a priority as we would want them to?"

Senator WARNER. Well, let me go to your fuel bank and I confess not to know a great deal about it, but suddenly, as I listen, the idea has a lot of appeal. But, I'm concerned about the—let's put it bluntly, the command and control of who gets the fuel, and how do they get it and when? Would we be faced with something like a regime that has a veto authority, like the Security Counsel now? One nation could veto the distribution of fuel to others?

You look at the enormity of the capital investment to build a nuclear plant, and yet you're putting that capital at risk to someone who has to make the decision, do you or do you not get fuel? How are you going to do the command and control and keep it separate from the reality that nations that could be participants in the fuel bank could be in an adversarial relationship? They exercise through third parties or something, some control over that person that has the levers to who gets the fuel and when they get it.

Senator NUNN. Senator Warner, I think all of those questions have to be worked and that's what the IAEA is looking at now. The governance is going to be a real challenge, how you govern and who makes the decision. But, I think when you look at, here's the road we're heading down right now: Seven or eight countries are about to go into enrichment, in the next year or two, I think, maybe as many as 10 and, if Iran, builds a weapon, more. If these countries go into enrichment we have a bad, bad, we have already a hard problem. It's going to get a lot worse. So, we have to find a way to give assurances that legitimate power-burning LEU is going to be available.

The first resource is the market. The marketplace works pretty well out there and as long as it works, right now countries really, unless they're going to build a huge number of power plants, the economics don't favor them going into enrichment. So, they're doing

something, if they go into enrichment, that's against their economic interest, fundamentally. So, that tells you something. Now, it tells you that they might be doing it for illegitimate purposes or it tells you they don't have the political confidence that the suppliers are going to be faithful to the contract or that the marketplace is going to work.

So, we have to augment the marketplace. It's not, in any way, substituting for the marketplace. There are going to have be tiers of guarantees. This fuel bank, the $50 and we hope a $100, that's $150. That's nowhere near adequate to be a backup supply. It's the final backup. It's not anywhere near the adequate, it's going to have to be one tier, among others. That's what Russia is talking about now and that's what the United States has proposed, Germany and others have also made proposals.

Senator WARNER. One last question, if I may, my former chairman that you were in those years. You did a wonderful job for this committee, and you came in after your most distinguished colleague from Georgia, Dennis Jackson, and all those giants that taught us our lessons. You handled your chairmanship very well.

Clearly there needs to be a greater international awareness of the problems that you have eloquently described today with our colleague, Senator Lugar. If you had the opportunity to sit down with our President, how would you speak to him in terms of, "Let's jump start the international recognition of the seriousness of this problem," to see what we could do to bring about some advancements, climbing back up that mountain again? Would you suggest the United States, maybe in partnership with the Russians, convene an international conference on this subject alone?

Senator NUNN. I believe what I would do is start with the President's own quotes. He said back during the campaign when he first ran that he thought we had thousands of weapons on hair trigger alert on both sides and that that was unacceptable and he was going to tackle that problem. That problem's still here. He also said that, on a number of occasions including when he was debating Senator Kerry on television, both of them said the number one security problem facing America was to keep weapons and material——

Senator WARNER. That's fine, that rhetoric's out there. What would you do if this afternoon you had the opportunity to sit down with him? What initiative would you recommend that he take?

Senator NUNN. I would start by telling him those two identifications were absolutely right, but the meat isn't on the bones. We're not doing nearly enough. I would say, "Mr. President, you have a great relationship with President Putin. The United States and Russia have a unique responsibility and obligation to lead because we are the leading nuclear powers by far. We have thousands of weapons on hair trigger alert. Why don't you talk to President Putin about both of you getting your military leaders to sit down for 6 months or whatever it would take and come back with a list of things we can do to greatly reduce the chances of any kind of accident, increase warning time? The second thing, why don't you talk to President Putin about a partnership between the United States and Russia to deal with nuclear materials all over the globe, so, that we take their expertise—and hopefully increasingly, as you

observed—their money, and help get this material under control, not just in the former Soviet Union, but all over the world."

The third thing on my list would be bio. I would say, "Mr. President, if the Soviet Union were going to use bio-weapons against us, they would have done it back in the old days. Why in the world can't we have transparency and accountability on the biological research efforts going on, on the defensive side? Because we think your defensive side is offense. You probably think our defensive work is offense. But, that's the perception we're battling. Let's have transparency, the two of us to begin with and then broaden it."

Those would be three things right on the top of the list, hair trigger, securing material, bio-transparency. If I made progress, I would go on from there. But, that might be all the President would want to hear in one meeting.

Senator WARNER. I thank you very much, Senator Nunn, for your work and my best to you and your family.

Senator NUNN. Thank you.

Senator REED. Thank you very much, Senator Warner.

Senator Nunn, thank you for your testimony and for your leadership and we look forward to working together with you for many, many years. Thank you, sir.

Senator NUNN. Mr. Chairman, thank you. I look forward to helping any way I can.

Chairman Levin, congratulations also in your new role and I look forward to seeing great things come from this committee under your leadership.

Chairman LEVIN. I appreciate that. We'll be calling on you.

Senator NUNN. Senator Warner will help you in every way.

Chairman LEVIN. He always has.

Senator WARNER. Yes, right.

Senator REED. Thank you.

Now let me call up our second panel, the Honorable William H. Tobey and Joseph A. Benkert.

Thank you very much for joining us, gentlemen. Your statements will be made fully part of the record, so if you'd like to summarize your written statements, that would be perfectly fine. Tthen we'll engage in at least one round of questioning.

We'll begin with Mr. Tobey.

STATEMENT OF HON. WILLIAM H. TOBEY, DEPUTY ADMINISTRATOR FOR DEFENSE NUCLEAR NONPROLIFERATION, NATIONAL NUCLEAR SECURITY ADMINISTRATION, U.S. DEPARTMENT OF ENERGY

Mr. TOBEY. Mr. Chairman, Senator Dole, thank you for the opportunity to discuss the President's 2008 budget request for the National Nuclear Security Administration's Office of Defense Nuclear Nonproliferation.

Before I start, I certainly want to acknowledge the fact that I'm mindful that we were following—both in terms of order of appearance and more importantly in terms of doing the important work of nonproliferation—giants in the field. I certainly very much respect the work of both Senators Lugar and Nunn and all that they've made possible for us to do.

I also very much appreciate the support of this committee for the work that we do, of which I'm proud and I believe is extremely important for U.S. national security.

The fiscal year 2008 budget request for $1.67 billion reflects both our progress in securing nuclear sites worldwide, as well as continuing challenges we face in accomplishing our mission. The request is for funding necessary to meet the goals of the Bratislava Nuclear Security Initiative on time, to secure or dispose of as much nuclear material possible for the fiscal year 2008, and to adapt our nonproliferation strategy to meet new challenges.

In February 2005, in Bratislava, Presidents Bush and Putin agreed to focus and accelerate cooperative nuclear security work in order to keep fissile materials out of the hands of terrorists. Under the resulting Bratislava joint statement, we have made remarkable progress with Russia to protect its nuclear weapons and materials. Meeting our commitment to include security upgrade activities at Russian nuclear sites by the end of 2008 will be our chief priority in fiscal year 2008. Although, your direct upgrade efforts are drawing to a close after over a decade of work, we will endeavor to continue to work with Russia to ensure the long-term sustainability of the systems and procedures that we have implemented.

The fiscal year 2008 budget reflects both the near-completion of security work in Russia and our transition to long-term sustainability. Additionally, our work in fiscal year 2008 under the Bratislava Initiative will include the conversion of HEU reactors to reactors that use LEU. We will also return Russian-origin HEU from eight countries to secure facilities in Russia for disposition.

Our efforts to secure or dispose of as much nuclear material as we can in fiscal year 2008 are not limited to the Bratislava effort. We're working with Russia, and we are scheduled to shut down at least two of the last three weapons-grade plutonium-producing reactors by December 2008. The remaining reactor is scheduled to be shut down by December 2010.

Our efforts to return U.S.-origin HEU from research reactors worldwide will also continue. The fiscal year 2008 budget request includes funding for U.S.-Russia Plutonium Disposition Program. Disposing of surplus plutonium in the United States and Russia will assure that this material can never again be used for nuclear weapons.

We are taking aggressive steps to interdict weapons-useable nuclear materials, and to prevent dissemination of nuclear-related technology via strengthened export controls and improved international cooperation. Our Second Line of Defense and Megaports programs work to enhance our foreign partners' ability to interdict illicit nuclear materials. Under these programs, we deploy radiation detection systems at high-risk land border crossings, airports, and seaports, increasing the likelihood of interdiction of diverted nuclear materials entering or leaving the country.

Additionally, our research and development efforts provide the National Nuclear Security Administration and other agencies with cutting-edge technology to detect and monitor nuclear weapons, production, proliferation and nuclear explosions worldwide.

To meet the threat from the international terror networks and rogue states, we must engage the international community. We are

working to implement United Nations Security Council Resolution 1540, which establishes a requirement to criminalize proliferation involving non-State actors and encourages States to strengthen export control laws and improve enforcement. Because keeping terrorists or rogue States from acquiring materials will be easier if we limit enrichment of uranium or reprocessing of spent fuel, the President proposed in 2006 the Global Nuclear Energy Partnership (GNEP), under which nations would have assured access to the benefits of nuclear power without the need to develop sensitive capabilities to enrich or reprocess fuel indigenously.

The risk of nuclear terrorism is certainly not limited to the United States and the success of our efforts to deny access to nuclear weapons and material is very much dependant on whether our foreign partners share a common recognition of the threat and a willingness to combat it. Last July, just before the G8 summit, Presidents Bush and Putin announced the Global Initiative to Combat Nuclear Terrorism. To strengthen cooperation worldwide on a broad range of related issues from nuclear material security, to detection, to enforcement and prosecution. Paired with U.N. Security Council Resolution 1540, we now have both the legal mandate and the practical means for concrete actions to secure nuclear material against the threat of diversion. These diplomatic efforts will extend and multiply the efforts of my organization to detect, secure, and dispose of dangerous nuclear material.

Again, thank you for the opportunity to discuss our budget, and I'd be happy to take any questions.

[The prepared statement of Mr. Tobey follows:]

PREPARED STATEMENT BY WILLIAM H. TOBEY

Thank you for the opportunity to discuss the President's fiscal year 2008 budget request for the National Nuclear Security Administration's (NNSA) Defense Nuclear Nonproliferation program. This is my first appearance before this committee as the Deputy Administrator for Defense Nuclear Nonproliferation, and I want to thank all of the Members for their strong support for our vital national security missions.

The Defense Nuclear Nonproliferation Program mission is to detect, prevent, and reverse the proliferation of weapons of mass destruction (WMD). Our nonproliferation programs address the danger that hostile nations or terrorist groups may acquire weapons-usable material, dual-use production or technology, or WMD capabilities. The fiscal year 2008 request for these programs totals $1.673 billion, a slight decrease from the fiscal year 2007 operating level. This reduction is the result of NNSA achieving and approaching important milestones in our nuclear security work in Russia, including the completion of major security upgrades at several sites under the International Nuclear Materials Protection and Cooperation (MPC&A) program and the anticipated end of construction of a fossil fuel plant in Seversk by the end of calendar year 2008 under the Elimination of Weapons Grade Plutonium Production (EWGPP) Program.

Acquisition of nuclear weapons, WMD capabilities, technologies, and expertise by rogue states or terrorists stands as one of the most potent threats to the United States and international security. The continued pursuit of nuclear weapons by terrorists and states of concern underscores the urgency of NNSA's efforts to secure vulnerable nuclear weapons and weapons-usable nuclear materials, to improve capabilities to detect and interdict nuclear weapons or materials, to halt the production of fissile material, and ultimately, to dispose of surplus weapons-usable materials. The fiscal year 2008 budget request will enable NNSA to continue the activities that support these crucial threat reduction initiatives.

Preventing access to nuclear weapons and material has many dimensions. Our highest priority is to keep these dangerous materials out of the hands of the world's most dangerous actors. Absent access to sufficient quantities of key fissile materials, there can be no nuclear weapon. Much of our emphasis has focused on Russia because that is where most of the poorly secured material was located. We have made

remarkable progress cooperating with Russia to strengthen protection, control, and accounting of its nuclear weapons and materials. Meeting our commitment under the Bratislava Joint Statement to conclude security upgrade activities at Russian nuclear sites by the end of 2008 will be our chief priority in fiscal year 2008. As a result of our efforts to accelerate this work in the wake of September 11 and the momentum created by the Bratislava process, we are well-positioned to reach this significant milestone on schedule. Although our direct upgrade efforts are drawing to a close after over a decade of work, we will continue to work cooperatively with Russia to ensure the long-term sustainability of the systems and procedures we have implemented.

Not all nuclear material of concern is located in Russia. We are working with other partners to secure weapons-usable nuclear materials worldwide and to strengthen security at civil nuclear facilities. One area of concern is research reactors, which often use a highly enriched uranium (HEU) fuel suitable for bombs. Our Global Threat Reduction Initiative (GTRI) seeks to convert research reactors worldwide from HEU to low enriched uranium (LEU) fuel and further to repatriate U.S. and Russian-supplied HEU from these facilities to its country of origin. A major accomplishment was the return of 268 kilograms of Soviet-origin HEU from Germany to Russia, where it will be down blended to LEU fuel. This repatriation operation represents the largest shipment of Soviet-origin HEU conducted to date under the GTRI.

We are taking aggressive steps to interdict weapons-usable nuclear materials and to prevent dissemination of nuclear related technology via strengthened export controls and improved international cooperation. As a complement to improving physical security, the Second Line of Defense (SLD) Program works to enhance our foreign partners' ability to interdict illicit trafficking in nuclear materials. Under this program, we deploy radiation detection systems at high-risk land-border crossings, airports and seaports, increasing the likelihood of interdiction of diverted nuclear materials entering or leaving the country.

The Megaports Initiative, established in 2003, responds to concerns that terrorists could use the global maritime shipping network to smuggle fissile materials or warheads. By installing radiation detection systems at major ports throughout the world, this initiative strengthens the detection and interdiction capabilities of our partner countries.

To prevent the diffusion of critical technologies, we are training front line customs officers around the world. We are working to implement U.N. Security Council Resolution 1540, which establishes a requirement to criminalize proliferation involving non-state actors and encourages states to strengthen export control laws and improve enforcement. Because keeping terrorists from acquiring materials will be easier if we limit enrichment of uranium or reprocessing of spent fuel, the President proposed in 2006 a new initiative, the Global Nuclear Energy Partnership (GNEP), which would provide nations which refrain from developing or deploying enrichment and reprocessing technology assured access to the benefits of nuclear power.

These are critical steps but they alone cannot address the problem. Indeed, there is enough fissile material in the world today for tens of thousands of weapons. An integral part of our strategy, therefore, has been to induce other states to stop producing materials for nuclear weapons, as the United States did many years ago. We recently submitted a draft treaty at the Conference on Disarmament in Geneva to do just that. We also supplement international diplomatic efforts with bilateral programs. For example, Russia still produces weapons-grade plutonium, not because it needs it for weapons, but because the reactors that produce it also supply heat and electricity to local communities. We are replacing these reactors with fossil fuel plants. By 2008, two of the existing three plutonium-producing reactors in Russia will shut down permanently, with the third shut down by 2010.

As previously indicated, there are a number of effective synergies between NNSA's weapons activities and our nuclear nonproliferation objectives. For example, we are disposing of the substantial quantities of surplus weapons grade material that resulted from the thousands of warheads that we have dismantled by downblending it to lower enrichment levels suitable for use in commercial reactors. We are also working with Russia to eliminate Russian HEU. Under the HEU Purchase Agreement, nearly 300 metric tons of uranium from Russia's dismantled nuclear weapons—enough material for more than 11,000 nuclear weapons—has been downblended for use in commercial reactors in the United States. Nuclear power generates 20 percent of American electricity and half of that is generated by fuel derived from Russian HEU. As a result, one-tenth of the U.S. electrical energy need is powered by material removed from former Soviet nuclear weapons. In addition to the efforts on HEU, the United States and Russia have each committed to dispose of 34 metric tons of surplus weapon-grade plutonium.

If we are to encourage responsible international actions, the United States must set the example. We have dramatically improved physical security of U.S. nuclear weapons and weapons usable materials in the years since the attacks of September 11. We recently withdrew over 200 metric tons of HEU from any further use as fissile material in nuclear weapons: a portion of this will be devoted to powering our nuclear navy for the next 50 years, obviating the need over that period for high-enrichment of uranium for any military purpose. Seventeen tons will be blended down and set aside as an assured fuel supply as part of global efforts to limit the spread of enrichment and reprocessing technology.

The risk of nuclear terrorism is not limited to the United States and the success of our efforts to deny access to nuclear weapons and material is very much dependent on whether our foreign partners share a common recognition of the threat and a willingness to combat it. Last July, just before the G–8 summit, Presidents Bush and Putin announced the Global Initiative to Combat Nuclear Terrorism to strengthen cooperation worldwide on nuclear materials security and to prevent terrorist acts involving nuclear or radioactive substances. Paired with U.N. Security Council Resolution 1540, we now have both the legal mandate and the practical means necessary for concrete actions to secure nuclear material against the threat of diversion.

FISCAL YEAR 2008 NNSA BUDGET REQUEST OVERVIEW

The President's fiscal year 2008 budget request for NNSA totals $9.4 billion, an increase of $306 million or 3.4 percent over the fiscal year 2007 operating plan. We are managing our program activities within a disciplined 5-year budget and planning envelope, and are successfully balancing the administration's high priority initiatives to reduce global nuclear danger as well as future planning for the Nation's nuclear weapons complex within an overall modest growth rate.

The NNSA budget justification contains information for 5 years as required by section 3253 of P.L. 106–065. This section, entitled Future Years Nuclear Security Program (FYNSP), requires the Administrator to submit to Congress each year the estimated expenditures necessary to support the programs, projects and activities of the NNSA for a 5-year fiscal period, in a level of detail comparable to that contained in the budget.

The fiscal years 2008–2012 FYNSP projects $50.0 billion for NNSA programs though 2012. This is an increase of about $1.5 billion over last year's projections in line with the administration's strong commitment to the Nation's defense and homeland security. The fiscal year 2008 request is slightly smaller than last year's projection; however, the outyears are increased starting in 2009. Within these amounts, there is significant growth projected for the Defense Nuclear Nonproliferation programs to support homeland security, including new initiatives and acceleration of threat reduction programs and increased inspection of seagoing cargoes destined for ports in the United States.

DEFENSE NUCLEAR NONPROLIFERATION PROGRAM AREAS

Global Threat Reduction Initiative

The administration's fiscal year 2008 request of $120 million for the GTRI is an increase of $4 million over the fiscal year 2007 operating plan. The GTRI reduces the risk of terrorists acquiring nuclear and radiological materials for an improvised nuclear or radiological dispersal device by working at civilian sites worldwide to: 1) convert reactors from the use of WMD-usable HEU to LEU; 2) remove or dispose of excess WMD-usable nuclear and radiological materials; and 3) protect at-risk WMD-usable nuclear and radiological materials from theft and sabotage until a more permanent threat reduction solution can be implemented. Specific increases in the GTRI budget reflect, for example, the serial production and delivery of 27 100-ton casks for transportation and long-term storage of 10,000 kg of HEU and 3,000 kg of plutonium removed from the BN–350 reactor site in Kazakhstan.

International Nuclear Material Protection and Cooperation

NNSA's International MPC&A fiscal year 2008 budget request of $372 million is a decrease of $101 million from the fiscal year 2007 operating plan. This decrease reflects the successful completion of nuclear security upgrade work at Russian Strategic Rocket Forces and Russian Navy sites. International material protection work continues in other areas, including the continuation of security upgrades at a significant number of sites within the Russian nuclear complex, including those operated by the Federal Atomic Energy Agency (Rosatom), and the 12th Main Directorate of the Ministry of Defense. Security upgrades for Russian Rosatom facilities

will be completed by the end of 2008—2 years ahead of the original schedule, consistent with the Bratislava Initiative.

The MPC&A Program is also focused on reducing proliferation risks by converting Russian HEU to LEU and by consolidating weapons-usable nuclear material into fewer, more secure locations. In fiscal year 2008, we will eliminate an additional 1.2 metric tons of HEU for a cumulative total of 10.7 metric tons.

Our SLD Program, a natural complement to our efforts to lock down vulnerable nuclear material and weapons, installs radiation detection equipment at key transit and border crossings, airports and major ports to deter, detect, and interdict illicit trafficking in nuclear and radioactive materials. During fiscal year 2008, the SLD Program plans to install detection equipment at an additional 51 strategic overseas transit and border sites. Under the Megaports Initiative, we have deployed radiation detection and cargo scanning equipment at six ports to date in Greece, the Netherlands, Bahamas, Sri Lanka, Singapore, and Spain. During fiscal year 2008, we plan to install detection equipment at three additional large ports: the port of Antwerp in Belgium, the port of Caucedo in the Dominican Republic, and the port of Salalah in Oman.

Additionally, we are joining elements of the Megaports Initiative and the Container Security Initiative (CSI) under a new maritime security initiative, the Secure Freight Initiative Phase I. This new initiative is a partnership between host governments, commercial container shipping entities and the U.S. Government that serves to increase the number of containers physically scanned for nuclear and radiological materials and to create a detailed record of each U.S.-bound container. Data from radiation detection equipment provided by NNSA and from non-intrusive imaging equipment provided by the Department of Homeland Security will enhance the identification of high-risk containers and facilitate the prompt resolution of potential nuclear or radiological threats.

Nonproliferation and International Security

While the thrust of GTRI and MPC&A is to secure nuclear sites, convert reactors, and repatriate fuel from reactors worldwide, NNSA's Office of Nonproliferation and International Security (ONIS) provides technical and policy expertise in support of U.S. efforts to strengthen international nonproliferation arrangements (e.g., the Nuclear Suppliers Group, United Nations Security Council Resolution 1540 and the Global Initiative to Combat Nuclear Terrorism). The ONIS staff also fosters implementation of global nonproliferation requirements through engagement with foreign partners and the redirection of WMD expertise, and helps develop and implement mechanisms for transparent and verifiable nuclear reductions. The fiscal year 2008 budget request for the ONIS is $125 million. This request includes funds for providing technical support to strengthen the International Atomic Energy Agency safeguards system and supports programs to improve foreign governments' export control systems. This request will augment U.S. nonproliferation cooperation with China and India, and enhance transparency and scientist redirection activities with Russia, Ukraine, Kazakhstan, Libya, and Iraq.

The budget request also supports activities to build up the nonproliferation component of the GNEP initiative. While GNEP is a long-term vision for the future of expanded use of nuclear power, NNSA plays an important role by providing leadership and technical expertise in the areas of safeguards technology, safeguards cooperation, and fuel supply arrangements to mitigate the proliferation risks that otherwise might accompany the expansion of nuclear power around the world envisioned by GNEP.

Elimination of Weapons Grade Plutonium Production

Turning to programs that focus on halting the production of nuclear materials, the EWGPP Program staff are working toward completing the permanent shutdown of two of the three remaining weapons-grade plutonium production reactors in Seversk and Zheleznogorsk, Russia. The fiscal year 2008 budget request of $182 million is a decrease of $44 million from the fiscal year 2007 operating plan, reflecting the planned completion of the fossil fuel heat and electricity facility at Seversk. The budget request provides the funding required to shut down these reactors permanently and to replace the heat and electricity these reactors supply to local communities with energy generated by fossil fuel plants by December 2008 in Seversk and by December 2010 in Zheleznogorsk. The reactors will be shut down immediately once the fossil-fuel plants are completed, eliminating the annual production of more than one metric ton of weapons-grade plutonium.

Fissile Materials Disposition

In addition to curbing the production of dangerous nuclear materials, NNSA is working to reduce the existing stockpiles of nuclear materials in both Russia and

the U.S. To that end, the fiscal year 2008 Fissile Materials Disposition budget request of $610 million will contribute to the elimination of surplus U.S. and Russian weapon-grade plutonium and surplus U.S. highly-enriched uranium. Of this amount, $480.8 million will be allocated toward disposing of surplus U.S. plutonium, including $333.8 million for the Mixed Oxide Fuel Fabrication Facility and $60 million for the Pit Disassembly and Conversion Facility (PDCF) and the Waste Solidification Building. Of the remaining amount, $66.8 million will be devoted to the disposition of surplus U.S. HEU and $20.2 million will be focused on supporting activities common to both programs.

This budget request also provides funding for ongoing efforts to dispose of surplus U.S. HEU, including down blending 17.4MT of HEU in support of establishing the Reliable Fuel Supply Program, available to countries with good nonproliferation credentials that face a disruption in supply that cannot be corrected through normal commercial means. This initiative marks the first step towards a key GNEP policy aim of creating a reliable nuclear fuel mechanism, providing countries a strong incentive to refrain from acquiring enrichment and reprocessing capabilities.

Nonproliferation and Verification Research and Development

The fiscal year 2008 budget requests $265 million for Nonproliferation and Verification Research and Development. This effort includes a number of programs that make unique contributions to national security by researching the technological advancements necessary to detect and prevent the illicit diversion of nuclear materials. Within the Proliferation Detection Program, fundamental research is conducted in fields such as radiation detection, which supports national and homeland security agencies. It also advances basic and applied technologies for the nonproliferation community with dual-use benefit to national counterproliferation and counterterrorism missions. Specifically, this program develops the tools, technologies, techniques, and expertise for the identification, location, and analysis of the facilities, materials, and processes of undeclared and proliferant WMD programs. As the sole provider for the science base to the U.S. national nuclear test monitoring system, the Nuclear Explosion Monitoring Program produces the Nation's operational sensors that monitor from space the entire planet to detect and report surface, atmospheric, or space nuclear detonations. This program also produces and updates the regional geophysical datasets enabling operation of the Nation's ground-based seismic monitoring networks to detect and report underground detonations.

Historically Black Colleges and Universities (HBCU) Support

A research and education partnership program with the HBCUs and the Massie Chairs of Excellence was initiated by Congress through earmarks in the Office of the Administrator Appropriation in fiscal year 2005, fiscal year 2006, and fiscal year 2007. The NNSA has implemented an effective program to target national security research opportunities for these institutions to increase their participation in national security-related research and to train and recruit HBCU graduates for employment within the NNSA. The NNSA goal is a stable $10 million annual effort. In fiscal year 2008, the Office of the Administrator appropriation will provide continued funding of $1 million to support certain HBCU activities. The programs funded in the Weapons Activities Appropriation will provide approximately $4 to $6 million of support to HBCU programs. In addition, the Defense Nuclear Nonproliferation Appropriation will provide approximately $2 to $3 million to this program. Lastly, the Naval Reactors Program will fund approximately $1 million of HBCU programs in fiscal year 2008.

CONCLUSION

I am confident that NNSA is headed in the right direction in the coming fiscal year. The budget request will support continuing our progress in protecting and certifying our Nation's strategic deterrent, transforming our nuclear weapons stockpile and infrastructure, reducing the global danger from proliferation and WMD, and enhancing the force projection capabilities of the U.S. nuclear Navy. It will enable us to continue to maintain the safety and security of our people, information, materials, and infrastructure. Taken together, each aspect of this budget request will allow us to meet our national security responsibilities during the upcoming fiscal year and well into the future.

A statistical appendix follows that contains the budget figures supporting our Defense Nuclear Nonproliferation Request. I look forward to answering any questions on the justification for the requested budget.

National Nuclear Security Administration

Appropriation and Program Summary Tables
Outyear Appropriation Summary Tables

FY 2008 BUDGET TABLES

National Nuclear Security Administration
Appropriation and Program Summary

(dollars in millions)

	FY 2006 Current Appropriations	FY 2007 Operating Plan	FY 2008 Request
National Nuclear Security Administration (NNSA)			
Office of the Administrator	354.2	340.3	394.7
Weapons Activities (after S&S WFO offset)	6,355.3	6,275.6	6,511.3
Defense Nuclear Nonproliferation	1,619.2	1,683.3	1,672.6
Naval Reactors	781.6	781.8	808.2
Total, NNSA	9,110.3	9,081	9,386.8

NOTE: The FY 2006 column includes an across-the-board rescission of 1 percent in accordance with the Department of Defense Appropriations Act, 2006, P.L. 109-148.

The NNSA budget justification contains information for five years as required by Sec. 3253 of P.L. 106-065. This section, entitled *Future-Years Nuclear Security Program (FYNSP)*, requires the Administrator to submit to Congress each year the estimated expenditures necessary to support the programs, projects and activities of the NNSA for a five-year fiscal period, in a level of detail comparable to that contained in the budget.

Outyear Appropriation Summary
NNSA Future-Years Nuclear Security Program (FYNSP)

(dollars in millions)

	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012
NNSA					
Office of the Administrator	395	405	415	425	436
Weapons Activities (after S&S offset)	6,511	6,705	6,904	7,111	7,324
Defense Nuclear Nonproliferation	1,673	1,798	1,845	1,893	1,942
Naval Reactors	808	828	849	870	892
Total, NNSA	9,387	9,736	10,013	10,299	10,594

Defense Nuclear Nonproliferation

Funding Profile by Subprogram

	(dollars in thousands)		
	FY 2006 Current Appropriation	FY 2007 Operating Plan	FY 2008 Request
Defense Nuclear Nonproliferation			
Nonproliferation and Verification Research and Development	312,658	270,387	265,252
Nonproliferation and International Security	74,250	128,911	124,870
International Nuclear Materials Protection and Cooperation	422,730	472,730	371,771
Global Initiatives for Proliferation Prevention	39,600	0	0
HEU Transparency Implementation	19,288	0	0
Elimination of Weapons-Grade Plutonium Production	187,100	225,754	181,593
Fissile Materials Disposition	468,773	470,062	609,534
Global Threat Reduction Initiative	96,995	115,495	119,626
Subtotal, Defense Nuclear Nonproliferation	**1,621,394**	**1,683,339**	**1,672,646**
Use of Prior Year Balances	-2,215	0	0
Total, Defense Nuclear Nonproliferation	**1,619,179**	**1,683,339**	**1,672,646**

NOTE: The FY 2006 Current Appropriation column includes additions for international contributions to the Elimination of Weapons-Grade Plutonium Production Program in the amount of $12,677,000, and the use of prior year balances in the amount of $2,215,000 for an approved appropriation transfer action to the Office of the Administrator.

Public Law Authorization:
John Warner National Defense Authorization Act of 2007, (P.L. 109-364)

Outyear Funding Profile by Subprogram

	(dollars in thousands)			
	FY 2009	FY 2010	FY 2011	FY 2012
Defense Nuclear Nonproliferation				
Nonproliferation and Verification Research and Development	305,105	335,564	353,047	364,528
Nonproliferation and International Security	133,041	158,693	166,479	174,276
International Nuclear Materials Protection and Cooperation	408,209	402,458	407,161	414,009
Elimination of Weapons Grade Plutonium Production	138,929	24,507	0	0
Fissile Materials Disposition	660,796	771,190	802,786	813,378
Global Threat Reduction Initiative	151,920	152,588	163,527	175,809
Total, Defense Nuclear Nonproliferation	**1,798,000**	**1,845,000**	**1,893,000**	**1,942,000**

Senator REED. Thank you very much, Mr. Tobey.
Mr. Benkert?

STATEMENT OF HON. JOSEPH A. BENKERT, PRINCIPAL DEPUTY ASSISTANT SECRETARY OF DEFENSE FOR GLOBAL SECURITY AFFAIRS, DEPARTMENT OF DEFENSE

Mr. BENKERT. Thank you, Mr. Chairman.

Mr. Chairman, Senator Dole, it's an honor to appear before you to discuss the CTR Program and the PSI. It is a particular honor to have been preceded at this table by Senators Nunn and Lugar.

Their legislative foresight, as has been well-described here this morning, forms the basis for the authority that we now use to help combat the threat of WMD and related infrastructure.

Clearly, Senator Nunn has remained a leading voice to maintain public awareness of the WMD threat, and Senator Lugar has been a tireless advocate for nonproliferation activities, both within the Senate, with the Department of State and in partnership with the Armed Service Committee, and has been a key steward and mentor of the program that he helped found. I also want to thank the members of this subcommittee for their strong support of DOD programs that serve to combat the proliferation of WMD.

Last year, we in DOD issued a national military strategy to combat WMD, which provides the overarching guidance to focus our military efforts, and our efforts in the Defense Department in support of the President's vision for National security. The strategy divided this complex mission area into eight types of activities: offensive operations, elimination, interdiction, active defense, passive defense, WMD consequence management, security cooperation, and threat-reduction cooperation.

CTR and Proliferation Security Initiative (PSI), which we will discuss this morning, are two important components in our tool kit for carrying out several of these activities in support of the strategy.

The traditional mission of CTR, seeks to halt the threat of WMD at its source, by destroying stockpiles and delivery systems. In cases where elimination was not possible, the next option was to safeguard the material from theft, or from diversion, through the installation of modernized security measures. Now, CTR—with its Proliferation Prevention Initiative—has gone beyond those two traditional areas, to help establish, in coordination with DOE, Department of State, and others, an outer ring of defense. A step away from the source, to stop WMD on the move, in transit.

In a complementary fashion, PSI works with allies and like-minded nations on means to stop WMD and missile-related shipments bound to and from non-state actors and in the states of concern. It does this by developing operational concepts for interdiction, by organizing a program of interdiction exercises, sharing information about national legal authorities to interdict WMD and related materials, and pursuing cooperation with industry sectors that can be helpful in the interdiction mission.

CTR celebrates its 15th anniversary this year. During this time, the CTR policy and implementation teams have developed a unique set of skills to deal with very dangerous materials in remote parts of the world. They still have much work to do related to existing CTR projects and agreements, but there will also be opportunities for new uses of CTR authorities.

We would welcome this committee's support, to make CTR a more nimble and agile tool for the long-term. In this regard, I would just note Senator Lugar's and Senator Nunn's testimony this morning. I would command to the committee's attention, Senator Lugar's proposal, introduced in S. 198 in January of this year, which seeks to streamline CTR's internal processes, by removing certification requirements.

Similarly, any flexibility the committee might provide for using CTR in areas outside the states of the former Soviet Union would position the program to be more responsive to emergent requirements, and to the evolving threat.

Let me mention, briefly, our fiscal year 2008 funding requests. From the standpoint of funding, the traditional CTR programs, largely located in Russia, are winding down. The capital-intensive construction projects, such as the chemical weapons destruction facility at Shchuch'yv and security installations at Russian nuclear weapons sites will be completed within the next 2 years. Construction of the chemical weapons destruction facility is now about 50 percent complete. We expect to amend the agreements and add the final contracts and funding to complete this project very soon.

In nuclear weapons storage security, what remains to be done is to provide—in conjunction with the DOE, an indigenous Russian capability to sustain the modernized systems our two Departments will have installed by the end of 2008. This will be a multi-year effort, but the levels of funding required will be considerably lower than what was needed at the height of the effort to install the upgrades themselves.

Our Department remains involved in transporting warheads to dismantlement and to centralized storage, while concurrently procuring over the next several years, new, safer and more secure rail cars in which the Ministry of Defense can transport these weapons. We continue to eliminate strategic offensive arms, but long familiarity with the processes and excellent cooperation from the Russian executive agent have led to greater efficiency in this area, so that we are, in fact, doing more with less.

As these projects are completed, the focus of the CTR effort is slowly moving away from its initial concentration on legacy Soviet stockpiles, and turning South and West towards Central Asia, the caucuses in the Ukraine. For fiscal year 2008 we have doubled our request for funding for the Biological Threat Reduction Program, and I point that out, particularly in view of the case that both Senator Lugar and Senator Nunn made, about the need to provide additional funding for dealing with the bio-threat.

The initiatives in the CTR program in this area include working to consolidate and secure dangerous pathogens, strengthening the ability to detect, diagnose, and respond to bio-terror attacks, and potential pandemics. We concluded agreements with the Governments of Azerbaijan, Georgia, Kazakhstan, Ukraine, and Uzbekistan, and we are implementing bio-programs in those countries.

Threat agent detection and response involves selectively locating in each of these countries, a network of epidemiological monitoring stations, capable of performing rapid diagnosis of disease outbreaks, with a secure, central reference laboratory where the initial diagnoses can be confirmed. Currently, one central lab, reference lab, is under construction in Georgia and network designs in the other countries are nearing completion.

The WMD Proliferation Prevention Initiative funding remains steady at about $40 million. Currently, this is working in four countries of the former Soviet Union—Ukraine, Azerbaijan,

Uzbekistan, and Kazakhstan. It seeks to develop in-depth WMD interdiction and detection capabilities over the long-term.

The development of these projects is labor-intensive, implementation can be costly, particularly in the maritime domain, and the geographic areas in which we work—particularly the Caspian and Black Seas—are challenging and complex.

Now, in the 5th year of this Proliferation Prevention Initiative Program, we're examining what we've accomplished, how we've complemented other border security efforts by other agencies, and where we'll go in the future.

Mr. Chairman, the eight missions that we identified in the National Military Strategy to combat WMD, represent a continuing challenge. CTR and PSI are important tools in our tool kit for addressing this challenge. These programs can evolve to meet the evolving threat. We look forward to working with you toward that end. Mr. Chairman, this concludes my statement and I'm prepared to take any questions you may have.

[The prepared statement of Mr. Benkert follows:]

PREPARED STATEMENT BY JOSEPH A. BENKERT

Mr. Chairman, members of the subcommittee, it is an honor to appear before you to discuss the Cooperative Threat Reduction (CTR) Program and the Proliferation Security Initiative (PSI). It is a particular honor to have been preceded at the witness table by Senators Nunn and Lugar, whose legislative foresight forms the basis of U.S. Government authorities to combat the threat of weapons of mass destruction (WMD) and related infrastructure. In private life, Senator Nunn has remained a leading voice to maintain public awareness of the WMD threat. Senator Lugar has been a tireless advocate for nonproliferation activities within the Senate and the Department of State, and in partnership with this committee has been a key steward and mentor of the CTR Program. I want also to thank the members of the committee for their strong support of Department of Defense (DOD) programs that serve to combat the proliferation of WMD.

Since DOD last testified on these subjects in March 2006, we believe much has been accomplished and we look forward to a productive year ahead for both CTR and PSI. The President has requested $348 million for fiscal year 2008 CTR activities; there is also a small request to support COCOM PSI-related exercises included in the Defense-Wide O&M section of the President's request. The Department urges your support for these requests. Appended to my prepared statement is a detailed description of the fiscal year 2008 CTR Program request.

COMBATING WMD

The first line of defense in combating WMD is international cooperation. We do this through bilateral working relationships, activities and agreements, and also through multilateral treaties and regimes. It is important that such agreements not be viewed as a panacea for the threat of WMD. The simple truth is that the worst proliferators tend not to sign up to treaties, and some nations that do sign up cheat. However, we also should not discount the value, in a layered defense strategy, of promoting norms of behavior and raising the bar for responsible behavior among nations that perceive an interest in strong relations with the United States and like-minded nations regarding proliferation of WMD. In this regard, DOD continues to play its role in interagency support for the Nuclear Suppliers Group, the Missile Technology Control Regime, the Australia Group, and the Wassanaar Arrangement, as well as the Nonproliferation Treaty, CWC, and Biological Weapons Convention. DOD also helped draft and table at the Conference on Disarmament the U.S. proposal for a Fissile Material Cutoff Treaty (FMCT). This effort has allowed the U.S. to move the discussions forward on an FMCT at the Conference on Disarmament and with allies.

As two examples of international cooperation, CTR and PSI are important components of DOD's "toolkit" for the combating WMD mission area. However, this toolkit is much broader, and is detailed in the Secretary's National Military Strategy for Combating Weapons of Mass Destruction, issued in February 2006. This was the first DOD-wide strategy document addressed specifically at the combating WMD

mission area. It followed the identification of combating WMD as one of four priority issues through which the 2006 Quadrennial Defense Review was conducted. The National Military Strategy for Combating WMD divided this complex mission area into eight discrete types of activities: offensive operations, elimination, interdiction, active defense, passive defense, WMD consequence management, security cooperation/partner activities, and threat reduction cooperation. CTR and PSI are elements of two of those mission areas. I think it is important that the committee keep the broader range of combating WMD activities in context, however. Our success in addressing this threat is a function of how well we do across the full spectrum of mission areas, not merely in two of them.

CTR and PSI are certainly among the most complex elements of the eight mission areas, and I am pleased to have the opportunity to focus on them in detail.

COOPERATIVE THREAT REDUCTION

The CTR Program is well-known to this committee, and we appreciate the active participation of you and your staff in guiding the program. The following comments review developments since this subcommittee last received testimony on CTR. In addition, I will outline our view for CTR's future.

PROGRESS

The past year has been very productive for CTR. Let me note a number of important accomplishments:

- We broke ground for a key bio-security facility in Tbilisi, Georgia, and are working closely with the government of Azerbaijan to do the same in Baku within the next year. Both of these governments have been very supportive as we jointly pursue improved WMD security, and we welcome their continuing cooperation. The bio-security facilities we have begun in these capitals are planned beginnings of a regional "constellation" of facilities that will give the U.S. and cooperating governments new insight into potential bio-weapons threats in the region.
- We finalized procedures for accelerated warhead security assistance in the Russian Federation. This project has been moving forward on schedule for completion in 2008 at the initiative of Presidents Bush and Putin at the 2005 Bratislava Summit. We appreciate Congress's $44.5 million supplemental appropriation for fiscal year 2006, which was essential to accelerate the project.
- In ongoing activities, CTR supported elimination of 70 silo-based and mobile missiles; secure transportation of 52 railcars of nuclear warheads to non-alert locations; completion of security upgrades at 11 nuclear weapons storage sites, and a variety of other activities.
- We extended for 7 years the CTR Umbrella Agreements with the Russian Federation and Ukraine. These agreements are the backbone supporting all CTR activities in those countries and represent an important political commitment to continued cooperation in the area of nonproliferation.
- CTR continued to meet expectations regarding its financial management. In the past, the program was criticized for running high unobligated balances and we have worked diligently to address these criticisms. CTR funds are appropriated with a 3-year life, and the program is run on a capital-budgeting basis. Thus, it is not only impossible, but counterproductive for CTR to spend its annual appropriation fully in the year of appropriation. CTR projected that its unobligated balance at the end of fiscal year 2006 would be well under $100 million. At the end of fiscal year 2006, our unobligated balance was in fact $72 million—continued evidence of improved fiscal stewardship of the program. In fact, congressional restrictions on CTR spending require a substantial carryover in order that first fiscal-quarter bills can be paid.
- CTR has also continued to refine its business practices at both the policy and implementation levels. In August 2006, the Office of Management and Budget gave CTR top honors for DOD with respect to its Program Assessment Rating Tool process. Of the 16 DOD "Service Asset and Service Acquisition Programs" assessed by OMB during the summer 2006, the CTR Program received the highest score (92 out of 100) and was 1 of only 2 programs to receive an overall rating of "Effective," which was the highest rating available.

CTR also faced some challenges in the past year.

• Construction of the "Shchuch'ye" chemical weapons destruction facility in Russia continued to present very difficult challenges to U.S. requirements for transparent program management. The facility is now fully funded at $1.039 billion—the final appropriation was for fiscal year 2007. However, over the past year there were significant problems ensuring that final contract awards could be accomplished transparently for prices that had a reasonable relation to the work proposed to be accomplished. After detailed negotiations, we are now poised to sign an agreement with Russia which will allow us to pull the Shcuch'ye project across the goal line within the U.S. budget. If that budget turns out to be insufficient, we expect to have Russia's commitment to fund whatever is necessary to complete the project.

I want to emphasize DOD's commitment to completing the Shchuch'ye project. Over the past year, concerns have been expressed that we are somehow trying to walk away from Shchuch'ye. This is not correct. The United States has invested nearly $1 billion so far in this project, which is intended to eliminate the most dangerous type of chemical weapons—nerve agent—in their most proliferable form—small artillery shells and rockets. For CTR's threat reduction mission, and for the integrity of the program, it is important that Shchuch'ye be completed. However, DOD can not do so where we cannot validate that the U.S. is receiving appropriate value for its investment to ensure that the mission is achieved. We believe our Russian partners understand our position clearly, share our concerns about managing costs, and are ready to sign an agreement that will lead to successful commissioning of Shchuch'ye.

• Cooperation among some Central Asian partners has been uneven. In some cases we have experienced inappropriate government scrutiny of our foreign-national subcontractors or interlocutors. In other cases, we have faced bureaucratic challenges getting CTR assistance exempted from local taxes. Despite the strenuous efforts of the Department of State and U.S. embassies to address these challenges, they continue to constrain the many good things CTR can do for U.S. and partner-country interests.

LOOKING FORWARD

The next few years will see several milestones for CTR, offering an opportunity to look farther ahead for the program. We expect to complete the Bratislava warhead security initiative in 2008, and the Shchuch'ye nerve agent elimination project in early 2009. In addition to continued progress in our missile elimination work in Russia, completion of these two very important and complex projects will mark several key changes for CTR.

First, we expect that this will be the first time in CTR's history that the level of effort outside the Russian Federation, as measured by program funding, will exceed the level inside Russia. This represents a significant array of accomplishments for the program managers, action officers and contractors in the U.S. and Russia who have spent over a decade seeking to secure the legacy of Soviet WMD production, and its related infrastructure.

The trend toward more CTR activity outside Russia reflects the realities of today. The Russian Federation finds itself in a much different position today than it was 15 years ago when CTR began. At that time, Senators Nunn and Lugar and their Russian counterparts had the foresight to understand the threat from unsecured, Soviet-era WMD across the states of the former Soviet Union. An enduring achievement of CTR is that it supported the secure repatriation to Russia of the Soviet Union's nuclear warheads located in Kazakhstan, Ukraine and Belarus. These countries also became CTR partners. Today, the Russian Federation has both the revived organizational capability as well as the resources to secure weapons of mass destruction inside its borders, and President Putin has committed to doing so. Thus, it is not surprising that CTR's level of effort in Russia is projected to decline. Indeed, with narrow exceptions, we anticipate that CTR will fulfill contracts and commitments already made in Russia, but not undertake any new work in the foreseeable future.

CTR conducts its work where partner nations request its assistance—it functions only in permissive environments. Russia has not asked CTR for new assistance, with narrow exceptions, for some time. If Russia believes that CTR can bring a special capability to bear on a WMD problem, we would always be willing to discuss it.

Moreover, the nature of the WMD threat has changed. When CTR began, the focus of the program was to eliminate or secure WMD at its source. This continues to be our preferred approach: the only way to have 100 percent confidence that

WMD or related infrastructure does not constitute a threat, is to get rid of it. However, we only have access to such stockpiles when the possessor state identifies them and requests assistance for elimination. Many of those known stockpiles or infrastructure were in the states of the former Soviet Union, including Russia, and CTR assistance has been requested to address them in many cases. Much of that assistance has already been provided. If WMD are found elsewhere, CTR is ready to provide security or conduct elimination operations, provided that doing so is consistent with U.S. policy and resource availability.

The threat from large stockpiles of WMD "at its source" and from related infrastructure continues. However, terrorists do not need large amounts of WMD to carry out their missions. After September 11 this administration sought to address WMD on the move, as well as at the source. The purpose of this revised approach was to help meet the challenge posed by non-state actors, who are not tied to large stockpiles or infrastructure. For CTR, this resulted in the Weapons of Mass Destruction Proliferation Prevention Initiative, which is intended to improve partner nations' WMD border security capacity. It also resulted in the Threat Agent Detection and Response (TADR) initiative, under CTR's Biological Threat Reduction Program. TADR is intended to improve partner nations' capacity to detect, characterize , and share information about biological threats and trends related to dangerous pathogens. This attention to capacity building, in addition to addressing "WMD in place," will help keep CTR current with the threats it is intended to address.

CTR is one of several tools in our nonproliferation toolkit. Some have said that because the CTR budget request is declining, the administration intends to declare victory and close the program. This is incorrect. The budget has declined in part because expensive, infrastructure-heavy projects such as Shchuch'ye, warhead security and missile elimination are all nearing completion or well beyond the half-way mark; and because new opportunities to use CTR's capabilities, in the type of circumstance the CTR model requires, are still being developed. Thus, the measure of CTR's health or its future is not how much money is being requested. Indeed, one of the key lessons we have learned is to measure our success by the nonproliferation return we receive on an expenditure and by accomplishment of the mission, not merely by how much equipment we supply to a partner. It may well be that CTR's budget request will need to rise in the future. Some capacity building is costly: the TADR program, which we have already begun to execute in several nations, involves providing some very complex facilities to accomplish its mission.

The CTR policy and implementation teams have developed a unique set of skills to deal with very dangerous materials in very remote parts of the world. They still have much work to do related to existing CTR projects and agreements, but there will be opportunities for new uses of CTR. No one should think that the program is being shut down. Indeed, we would welcome the committee's support to make CTR a more nimble tool for the long term. In this regard, I would commend to the committee's attention the provisions of S.198, introduced on January 8, 2007 by Senator Lugar which seek to streamline CTR's internal processes. Similarly, any additional flexibility the committee might provide for using CTR outside the states of the former Soviet Union would position the program to be more responsive to emergent requirements and the evolving threat I described, should the need arise. However, any expansion of CTR to new regimes or for new purposes will need to be considered carefully in light of the full array of WMD tools available and in view of CTR's core business activities—elimination, security, and capacity building to address the threat of WMD and related infrastructure and delivery systems. We believe we have the right models in place for these activities, and that staying focused on them is the key to keeping the program running correctly.

PROLIFERATION SECURITY INITIATIVE

The United States continues to work with other governments on the PSI, which President Bush launched in May 2003. Through the PSI, the United States collaborates with like-minded countries on how to stop WMD/missile-related shipments bound to and from non-state actors and states of concern while also working to enhance our individual and collective WMD interdiction tools.

Since Assistant Secretary Flory last testified before this Subcommittee in March 2006, the number of countries that have endorsed the PSI Statement of Interdiction Principles has increased to over 80. The United States plays a leading role in the the PSI Operational Experts Group (OEG), which meets on behalf of all PSI participants to discuss and advance PSI objectives. The OEG brings together 20 countries and their experts from the military, law enforcement, intelligence, legal, and diplomatic arenas. These experts develop new operational concepts for interdiction; organize a program of interdiction exercises; share information about national legal au-

thorities; and pursue cooperation with industry sectors that can be helpful to the interdiction mission. Through these efforts, OEG participants raise the level of collective and national interdiction capabilities. New Zealand recently hosted the 14th OEG meeting in Auckland in March 2007. Greece will host the next OEG meeting in October 2007.

DOD is responsible for leading the OEG process, the locus of operational aspects of PSI. To date, PSI partners have had 25 PSI OEG exercises that have explored all modes of transportation: ground, air, and sea. These exercises have brought to bear the expertise and operational assets of both the military as well as law enforcement agencies, reflecting the cooperative and multi-dimensional forms that real-world interdictions can take. These exercises have also been hosted by a range of countries around the world, and they provide an opportunity for nations that yet to endorse PSI to observe the operational aspects of PSI. Over 50 PSI participants have participated in or sent observers to these 25 exercises, while about another 20 non-PSI participants have sent observers.

PSI exercise Leading Edge, hosted by the United States and Bahrain in October 2006, was the first to be conducted in the Persian Gulf. In addition to six nations that sent operational assets (Australia, France, the United Kingdom, Italy, Bahrain and the United States), the United Arab Emirates, Japan, Spain, South Korea, Pakistan and Qatar sent observers . The United States continues to help plan or participate in a range of upcoming PSI exercises planned for 2007.

In addition to exercises, table-top games and simulations have also helped participants work through interdiction scenarios, and they have, in many cases, improved the way participating governments organize to conduct interdictions. To this end, the United States will host another PSI game for OEG states at the Naval War College in Newport, Rhode Island in June 2007.

We have seen other concrete benefits from the PSI. Participation in PSI has helped countries improve their internal interagency processes, communication with counterparts in foreign countries, understanding of international and domestic legal authorities, and understanding of applicable resoures and assets. All of these improvements have in turn helped countries in other areas, such as in fulfilling their obligations to implement United Nations Security Council Resolutions (UNSCR) 1718 (DPRK sanctions) and 1737/1747 (Iran). In discussions of UNSCRs 1718, 1737, and 1747 in the last two OEG meetings, a number of countries have cited that their work on PSI has helped lay the groundwork and develop the processes or mechanisms that they need to implement these chapter VII resolutions.

The PSI has been and remains an invaluable nonproliferation activity, and we will continue to work close with our PSI partners to maximize its potential.

CONCLUSION

Mr. Chairman, the eight missions identified in the National Military Strategy to Combat WMD represent a continuing challenge for us. They are complex because the threat is complex; the next edition of this strategy document could change in important ways, because the WMD threat will change. As it does, we are prepared to make changes in programs like CTR. The same is true for PSI, though this activity is still new enough that we ought not begin speaking of significant changes just yet. The WMD threat is significant, and PSI and CTR are important tools that should be considered to fight that threat. We look forward to working closely with Congress toward that end.

Annex

FY2008 Cooperative Threat Reduction (CTR) Program Budget Request

FY 2008 Total: $348 million

Russia. The United States would like to see Russia become a full partner in the Global War on Terrorism and in combating WMD proliferation; comply fully with its arms control and nonproliferation obligations; and safely and securely store its nuclear weapons, fissile material and dangerous pathogens. As parts of this vision, which CTR may help realize, are being met, CTR funding for Russia is decreasing.

The FY 2008 budget request for Strategic Offensive Arms Elimination (SOAE) is $77.9 million. SOAE assists Russia in eliminating strategic delivery systems and infrastructure. SOAE assistance is framed as an incentive for Russia to draw down its former Soviet nuclear forces. FY2008 funds will eliminate 25 SS-18/SS-19 launchers, 21 missiles and launch control centers, 20 sea-launched ballistic missile (SLBM) launchers, one associated strategic ballistic missile submarine, and 10 SLBMs, 33 SS-25 road-mobile launchers, and 44 ICBMs, and will procure 4 isothermal railcars for transporting loaded motor cases.

The Nuclear Weapons Storage Security program assists Russia in upgrading and modernizing security for nuclear warheads in storage. As upgrades to all the sites for which the Russian Federation has requested assistance will be completed using FY2006 and FY2007 funds, the FY 2008 request has declined to $23 million. These funds will be used to sustain the security upgrades installed at the first 12 Ministry of Defense (MOD) nuclear weapons storage sites and temporary transshipment points for movement of deactivated warheads and to begin the process of creating an indigenous capability within MOD to sustain upgrades in future.

For the Nuclear Weapons Transportation Security program, we have requested $37.7 million. This program provides safe and secure transport of nuclear warheads from deployed sites to dismantlement or enhanced security storage sites, assists in maintaining MOD's current fleet of aging railcars, and will procure 20 railcars for transporting warheads in FY2008. Russia has agreed to destroy two warhead transport railcars at its own expense in exchange for each new railcar CTR provides.

CTR Biological Threat Reduction (BTR) efforts in Russia are limited by current policies in Russia and access to locations believed to have dangerous pathogens. The FY 2008 budget request is $5.7 million (of the $144.4 million requested for all BTR activities). This supports planned cooperative research projects to improve vaccines and identify better anti-viral medications for smallpox.

There was no budget request in FY2008 for the Chemical Weapons Destruction (CWD) program. The funds appropriated and authorized in FY2007 were sufficient to complete the

construction and systemization of the U.S.-funded portions of the facility. The CWDF is being built to destroy nerve agent-filled, man-portable, artillery and missile warheads. This facility, which includes a second processing building built with Russian and other international donor funding, will be able to destroy 1700 metric tons of nerve agent per year.

Non-Russian FSU States. Robust programs to combat bio-terrorism and prevent WMD proliferation are underway in several countries.

The budget request for the Biological Threat Reduction (BTR) program is for $144.4 million. DoD is assisting Georgia, Kazakhstan, Uzbekistan, Azerbaijan, and Ukraine to develop a systematic capability to prevent proliferation of biological weapons related technology, pathogens, and expertise and rapidly detect and diagnose any disease outbreaks of especially dangerous pathogens. Linked to this are tailored cooperative biological research (CBR) projects to identify the locations of dangerous indigenous pathogens in each country and the means by which they are transmitted. We are working with the countries to obtain copies of the strains of the indigenous pathogens so the best reagents for rapid diagnosis are made available. The following describes the threat reduction and proliferation prevention activities that will be accomplished with the FY 2008 funds:

- Georgia: Continue construction of the central reference laboratory that will secure all dangerous pathogens and provide a capability to characterize pathogens and validate diagnoses. The pathogen repositories (one for human and one for veterinarian pathogens) and an accompanying small suite of laboratory space will be built to bio-safety level three standards.

- Uzbekistan: Continue to construct epidemiological monitoring stations and provide training for personnel to rapidly respond to and diagnose disease outbreaks. Continue CBR projects.

- Kazakhstan: If the tax issue can be resolved, DoD will initiate the Central Reference Laboratory, continue to construct/renovate epidemiological monitoring stations and provide training for personnel to rapidly respond to and diagnose disease outbreaks. Continue CBR projects.

- Azerbaijan: Construct/renovate four epidemiological monitoring stations and provide training for personnel to respond and rapidly diagnose disease outbreaks. Continue to provide training for personnel to rapidly respond to and diagnose disease outbreaks and CBR projects.

- Ukraine: Construct/renovate five epidemiological monitoring stations. Continue to provide diagnostic and epidemiological equipment and training to rapidly respond to and diagnose disease outbreaks. Continue CBR projects.

The budget request for the Weapons of Mass Destruction Proliferation Prevention Initiative (WMD-PPI) is $38 million which will be used to enhance the capabilities of selected non-Russian FSU states to detect and interdict illicit trafficking in WMD and related materials. In implementing the WMD-PPI, DoD has developed projects designed to produce

comprehensive operational capabilities, taking into consideration existing strategic planning and policy documents, including security and theater cooperation guidance.

The following describes the WMD proliferation prevention activities planned to be undertaken with the FY 2008 funds:

- Azerbaijan - Caspian Sea Maritime Project: Enhance radar surveillance capability. Evolve concept of operations to define WMD-related roles and missions for appropriate maritime forces. Refurbish additional patrol craft.

- Kazakhstan – Caspian Sea Maritime Project: Continue to provide training and related WMD detection and interdiction assistance. Develop concept of operations and explore legislative basis for Kazakhstan maritime detection and interdiction roles and missions.

- Ukraine Land Border and Black Sea Maritime Projects: Continue to enhance WMD detection and interdiction capabilities along Ukraine's border with Moldova. Improve detection and interdiction capability on the Black Sea and at key ports of entry..

- Uzbekistan Land Border Project: Complete portal monitoring project. Provide additional training and related equipment to enhance detection and interdiction capabilities. Land border project to enhance mobility, communications, transportation and interdiction/detection capabilities under consideration.

The FY2008 budget request for Defense and Military Contacts is $8 million. This program engages military and defense officials in activities that promote demilitarization, regional stability, counter-proliferation, and defense reform; builds security cooperation with the Eurasian states; and promotes exchanges that enhance interoperability with U.S. and NATO forces for the purposes of multinational operations.

For other program support, we have requested $19 million. These funds will be used to assist the overall implementation of the Program in areas not unique to established projects, such as negotiations on an implementing agreement. It includes the audit and examination program and overall program management and administration.

Senator REED. Thank you very much, gentlemen.

I presume we can do at least two rounds of 6 minutes, so let me begin, and let me begin with Mr. Tobey.

My first focus is on the Mixed-Oxide (MOX) Fuel Program. We know that's been an episodic process on both sides of the ocean, both the Russians and the United States.

Specifically, will DOE go forward with the MOX Program, with or without a Russian commitment to finish their project?

Mr. TOBEY. We believe that the MOX Program is in the U.S. interest, regardless of what the Russians do. However, we intend fully to hold the Russians to the 2000 Plutonium Disposition Agreement, and we actually think that the chances are better that we will be able to hold the Russians to that agreement, if we proceed with our program.

Senator REED. Thank you, Mr. Tobey.

Are there any alternatives to MOX that you're considering?

Mr. TOBEY. Mr. Chairman, over the last, I think, well, maybe more than a decade, a decade or so, many alternatives have been discussed. I think that some three dozen were initially discussed, in the original origins of the program. This has been narrowed down over time, and I think DOE last reported on three possible alternatives at the request of Congress: the MOX Program, vitri-

fication, or storage. Storage—or simply doing nothing, but continuing to secure the material, using 50-year life cycle costs, turns out to be the most expensive alternative. Of course, at the end of the 50 years, something must be done with the material at that point. During all of that time, it still remains material that could—at least theoretically—be used for nuclear weapons and, so we don't accomplish our nonproliferation goals.

Vitrification is also a possibility. The estimated costs were not found to be substantially different than the MOX program, however, there's a great deal more technological, and therefore, financial risk. We're probably at least several years—perhaps as many as 8, years of research and development away from even beginning a vitrification effort. I would point out, the MOX program, the facility is actually 85 percent complete with its design.

Senator REED. Well, I understand and appreciate your commitment to completing it is in our interest, even without a Russian factor. But, there are some issues in timing, and one issue is that the plant will not be completed in 2011, but you want to start initial construction immediately, is that the case?

Mr. TOBEY. My understanding of the continuing resolution that was passed, prohibits us from starting construction activities until August 1, but we would like to start construction as soon as possible thereafter.

Senator REED. But the design phase will go much beyond that, design phase stretches to 2011, is that our impediment to a good, solid project?

Mr. TOBEY. The design is basically, well, it's somewhat greater than 85 percent complete. I think it's actually now, the last time—since that figure was formulated, and I think we've gone a little bit further.

Some of design makes sense to do as you're doing the—as you're constructing the plant. As you probably know, Senator, the plant wouldn't be finished until 2015. So, some of that design work can go on as construction occurs.

Senator REED. We're going to spend at least $5 billion to build and start up the plant. For 14 years, dispose of only the agreed-upon 34 tons of plutonium, which begs the question—what happens to the additional excess U.S. plutonium? Shouldn't we design and build a plant that could fully-convert all of this plutonium?

Mr. TOBEY. Our view is that we should try and use the plant for as much of the material as possible. Some of the material may not be suitable for use in light-water reactors, because of contaminants within the material. But, it would be our objective to use it as much as possible. We're committed to using the plant for the 34 metric tons, as you noted.

There's up to 13 additional metric tons that would be disposed of through other disposition paths. But, the phrase, "up to" is key there. It would be our intent to put as much as possible through the MOX program.

I'd also note that if there are further declarations of plutonium as excess to defense needs, that would likely be run through the MOX process. As well, we're looking into the possibility that the MOX plant could be used to produce driver fuel for fast reactors

that might be pursued under the GNEP. So, we're trying to use the plant for as many purposes as possible.

Senator REED. This is my final question. The last National Defense Authorization Act required an independent cost estimate be conducted by DOE, and in lieu of an independent cost estimate, I'm told you have conducted an independent cost review. Is this accurate, and why is the independent cost estimate not being done?

Mr. TOBEY. I must admit, Senator, I'm not familiar with the exact distinction of, what the technical distinction between the two terms. I know that Burns & Rowe did look at the cost of the MOX plan. As a result of that, the total project cost was increased, the Reserves were increased as a result—it was a comprehensive study that cost roughly $1 million. But, I'd be happy to get back to you on that——

Senator REED. I think it would be helpful. Again, this is this sort of a distinction that is important, but, I think, should be clarified. So, if you could clarify the distinction and let us know, because the legislation called for this cost estimate, not just a review.

Mr. TOBEY. Certainly, sir.

Senator REED. I'd appreciate that.

[The information referred to follows:]

An independent cost estimate (ICE) of the Mixed Oxide (MOX) Fuel Fabrication Facility (Project 99–D–143) was prepared by the Jupiter Corporation on March 6, 2001, for the Department of Energy's Office of Engineering and Construction Management (OECM). Subsequently, delays caused by a liability impasse with Russia, constrained funding in the outyears and a partial redesign of the MOX facility to accommodate quantities of impure plutonium resulting from the cancellation of the immobilization project all have contributed to further delays in the MOX project schedule and increases to its total project cost. In 2006, in preparation for Critical Decision 2 (approval of performance baseline) approval, the MOX project cost estimate was updated to reflect current year dollars, escalation and risk contingency, including cost and schedule impacts associated with the liability impact, constrained funding and the MOX redesign. This cost estimate was again independently reviewed and validated by the engineering firm of Burns and Roe Enterprises, Inc. as part of OECM's external independent review (EIR) process. A report containing the review criteria, details of areas reviewed, findings, and DOE corrective actions was provided to Congress on April 4, 2007.

In contrast to an ICE, in which only cost is evaluated, an EIR is much broader, taking into consideration 13 other essential project management elements such as, program and design requirements, results of design reviews, integrated resource loaded project schedule, project execution plan, risk management plan and the procurement and acquisition plans, all which are essential to the execution phase of the project. As part of the EIR, Burns and Roe evaluated the contractor's basis of estimates, including cost of materials and labor, structural and equipment installation unit rates, escalation, technical and programmatic risks, schedule and cost uncertainty, as well as project risk contingency associated with completing the design, construction and cold startup scope of work. Related construction work packages, projected resources and integrated project schedule activities were also reviewed as part of this effort. As a result, an additional $359 million was added to estimates proposed by DOE's contractor to reflect increases in the cost of some the construction activities, escalation rates, and contingency.

Senator REED. Mr. Benkert, again, thank you for your testimony. As you've pointed out, the committee's been very supportive of the CTR Program's effort to expand into biological security. Even though funding from this expansion plan was not included in the fiscal year 2008 budget request, I understand that you would like to get additional resources in the 2009 request. Could you briefly set out what work you'd like to do and where, with respect to biological initiatives?

Mr. BENKERT. Mr. Chairman, I think as I said, we have substantially expanded the funding in the 2008 request, specifically for bio, to do work in the five countries that I mentioned. I think we are looking at the possibility in future years for expanding this work to other countries, but also what additional work we need to do to follow up on the work we've started in the countries of concern.

So, for example, we have a set of things that we are doing, which involve a series, a network of epidemiological stations to—which will be able to detect biological agents or extremely dangerous pathogens. Then a central reference laboratory to do diagnosis and other kinds of work.

So, I think our view is, at this point, that we have adequate funding for what we have set out to do, and we are looking at what we might do to expand the program. I think our caution would be that, I mean, we are doubling the size of the program, in terms of funding, in this coming year, and we would, I think, be reluctant to put much more money into the program until we make sure that we can manage what we have, given the fact that it's about to double in funding.

Senator REED. Thank you.

Senator Dole.

Senator DOLE. Thank you, Mr. Chairman.

Mr. Benkert, let me begin with you and ask, I understand that our troops have found some stocks of old, this would be pre–1991 Gulf War chemical weapons in Iraq. They're stored in bunkers that are under our guard, and they pose a safety and an environmental hazard. If they were to get into the wrong hands, of course, they could pose a threat to coalition troops, and to the Iraqi civilian population. Is there consideration being given to using CTR assistance to help Iraq destroy these old chemical weapons? If so, what factors is the administration looking at? What are they considering as this decision is being weighed?

Mr. BENKERT. Thank you, Senator Dole.

As you said, there are old chemical weapons in Iraq, in a variety—we discover them, occasionally the insurgents discover them as well, and then there are certain areas where there are stockpiles of these.

We have, in fact—we are in fact looking at the possibility of the use of CTR funds to help to assist the Iraqis in destroying these weapons. I think the issue that we have, of course, is—referring to Senator Lugar's point, that we are limited in our ability to use CTR outside of the former Soviet Union by the current restrictions of $50 million annually, and a requirement for a Presidential determination. So, I think it would be useful to us, if there were greater flexibility, it would provide us some greater flexibility to look at what we might do in Iraq. I think, part of this also is, will be tied to Iraq's accession to the Chemical Weapons Convention, and their declarations to the OPCW, which will then put them in a position where they're obliged to start destroying these weapons. But, yes, we are looking at how we could help them do that.

Senator DOLE. Let me visit with you about Shchuchye for a few moments. Of course, this is the last large CTR construction project in Russia, and we understand that DOD has recently negotiated with Russia to have Russia assume responsibility for completing

the construction, using U.S. funds that have already been provided and allocated to the project.

DOD does not plan to provide any additional funding, as you've indicated, for this facility. But, given the large U.S. investment in this facility, and the sensitivity of its function—destroying chemical weapons, it's important that the United States have high confidence that the facility will operate properly and safely once it's turned over to the Russians.

Has DOD pared back the scope of its work on systemization of this facility, and the training of the Russian operators as a result of this development? If so, can you assure us that the facility will operate as designed, and that the Russian workers will be adequately trained, so that we can be confident in the safe operations of this, largely U.S.-funded facility?

Mr. BENKERT. Senator Dole, I can assure you that we are committed to seeing this project through to its completion to ensure that this important facility does, in fact, function as designed, and is able to destroy the weapons.

I mean, we completely share the views—I think, again, expressed here this morning by Senator Nunn, of the importance of this work. This is the largest stockpile in the world of probably the most dangerous chemical weapons in the world. So, I can assure you that we are committed to seeing it through. I think we have had some issues in contracting in order to get this program completed, I think we have arrived at an effective, and also I think, creative way of structuring the contracts for the remaining work, so that we can do this within the budget that we have been given, and do it at a reasonable price.

We will be watching this very carefully as it progresses, to make sure that, in fact, that the work does what it's supposed to do.

Senator DOLE. Thank you.

Mr. Tobey, we're all watching cautiously to see whether the agreements reached at the Six-Party Talks will be honored in North Korea, whether North Korea will ultimately make good on its commitment to shut down, and eventually to dismantle—with verification—its nuclear weapons program.

What role is DOE playing in helping to assess the accuracy of the North Korean declaration regarding its nuclear programs, and what role is DOE possibly playing here, with regard to helping to develop a reliable verification system.

Mr. TOBEY. Senator Dole, DOE's been an active participant in the negotiations, I actually participated myself in three rounds of the talks while I was at the National Security Council. But while I was there, there was a colleague from the DOE, now one of our people continues to go to those talks. So, we're participating in the negotiations, advising Ambassador Hill on the technical aspects of what would be required for verifiable dismantlement of the North Korean nuclear program.

We've also been an active participant in interagency discussions on, what would be required for verifiable dismantlement of the North Korean program. As you probably know, we haven't yet received a declaration from North Korea, but we would expect to be active participants in analysis of that declaration. When the time came, and while no roles have yet been determined among the par-

ties, I would expect that if the United States takes a leading role in verifying the dismantlement of the program, that the DOE would be actively involved in that.

Senator DOLE. Thank you.

Earlier, I raised a question about the Iraqi scientists. I'd like to have you elaborate on where we stand there.

In 2004, DOE launched an initiative, as I understand it, to provide employment opportunities for these Iraqi scientists, but because of security considerations, that program did not advance rapidly.

But, I'm interested in how many scientists may have participated, and in your view, if this program were to be expanded and extended, the number of scientists who might want to take advantage of such an opportunity. Could you just update us regarding the status and the progress of this program?

Mr. TOBEY. Sure, it's a difficult issue. Because, as you noted, the security situation is difficult. We did work in—directly in Iraq, early on, and there were programs aimed at both bettering the Iraqi people, and also making use of the scientific expertise that was resident within Iraq.

We've concentrated more recently on programs that are located outside of Iraq, where we can bring Iraqis to be trained, and those programs do continue, they're not large, but we're continuing to train Iraqis. I will have to get back to you on the exact number of participants that have been through this.

[The information referred to follows:]

Scientist engagement is carried out by NNSA's Global Initiatives for Proliferation Prevention (GIPP) program. This program, established in 2005, combined existing scientist redirection programs that targeted the Former Soviet Union and expanded the mission of these programs to meet emerging challenges, such as Libya and Iraq.

In Iraq, GIPP currently sponsors 13 projects involving 41 Iraqi scientists. Many of these projects directly contribute to the reconstruction of Iraqi infrastructure, such as water purification techniques. Other projects have potential medical or pharmaceutical applications. GIPP projects are approved to maximize participation by scientists with weapons of mass destruction skills and expertise in nuclear weapons and nuclear energy, weapons safety, weapons design, and explosives. None of these scientists is employed or trained in the United States under these projects.

Senator DOLE. Thank you.

Senator REED. Thank you very much, Senator Dole. Let me leave with a couple of additional questions, and recognize Senator Dole again.

DOE is responsible for a lot of research and development, which is critical to nonproliferation—forensic identifications, and all of that which is going to be increasingly important as we see more and more nations begin to develop nuclear energy programs, and perhaps worse.

I'm just wondering, with respect to both DOE and DOD, do you think you have adequate resources for the kind of research programs that are necessary, Mr. Tobey?

Mr. TOBEY. Yes, Senator. Although, as you note, it is a very high priority. In our case, because we are among the few that provide funds for basic research, as opposed to applied research, I think those dollars are very critical, not only to the work of DOE, but as support for other agencies.

Senator REED. Are there any areas that you feel are under funded, in terms of this research? That are absolutely important going forward, but are not receiving adequate resources?

Mr. TOBEY. No, sir.

Senator REED. If you think of some, don't be shy about letting us know.

Mr. TOBEY. Thank you.

Senator REED. Mr. Benkert, in terms of DOD research, to the extent that you have sort of a window on that, are there any areas of concern that you have the research dollars aren't there for these, to support the counterproliferation programs?

Mr. BENKERT. Mr. Chairman, I think again, in terms of the nuclear issues, primarily to DOE on this, but I think you hit upon an important topic, which is this ability—the forensic ability to determine where materials come from.

I think the observation I would make is that in terms of nuclear materials, there has been much progress, and I think probably we are in reasonably good shape. In terms of being, if the forensic capabilities, if chemical weapons were used, or biological weapons, probably not so. I would have to get back to you on the specifics of whether we have adequate funds invested in those areas or not, but I think clearly it's the case that more needs to be done there.

Senator REED. I think so. Because, again, without the telltale irrefutable link back to a source, deterrence doesn't work.

Mr. BENKERT. Right.

Senator REED. You're left with pre-emption, or you're left with, just fingers crossed and hoping for the best, and I don't think we want to be in that position. So, this effort going forward of adequate research, and particularly when it comes to forensics of chemical, biological, and nuclear weapons is absolutely critical, and I'd appreciate your thoughtful response in this regard.

The final question I have is that, we seem to have reached some significant milestones with respect to the initial vision of the Conference for Threat Reduction. We have facilities in place to destroy chemical weapons that we're seeing come online and we are looking, dealing with transferring plutonium into MOX. The question, I think, now, is what's the next thought about programmatically, geographically—where do we go now? Sort of, the CTR II? Mr. Tobey?

Mr. TOBEY. Mr. Chairman, when I took this job last August, I talked about three priorities. The first was to get Bratislava done on time, or if possible, early. I think we're winding down that effort, we're on a track to getting our work complete by the end of 2008. The second was good program management, because I know that's been an issue at DOE, and we deal with complicated, expensive programs, and that's important. The third, though, was to make sure that our strategy met the evolving threat that we face. That, I think, is a particularly important problem. I think as we begin to complete our work in the former Soviet Union, and move from control of material to sustaining those efforts, we also need to turn our attention elsewhere.

A couple of areas have been mentioned already by the first panel and others in the room, and I agree with those sentiments. I think that while we all hope that the agreement with North Korea holds,

until we're certain that that program is fully dismantled, I think we have to attend to the possibility that there could be proliferation from North Korea, given its record as a proliferator of missile equipment and other dangerous military technology.

I think also in South Asia, there are some proliferation concerns. I would hope that the full suite of the activities that we undertake—both in terms of second line of defense and best practices—could be applied to those areas.

In that regard, I'm very much encouraged by the Global Initiative to Combat Nuclear Terrorism. That was an initiative that was started by Presidents Bush and Putin at St. Petersburg last year. The model for the membership is like the PSI, it started with a small group, the G8, plus four other nations—Australia, China, Kazakhstan, and Turkey. Since then, Morocco has joined, and the group has set out, first, a set of principles to guide their action, and then that was done in Rabat last fall, and in January in Ankara, Turkey, they adopted a work program, and then in June, we're hopeful that the membership of the organization will greatly expand.

I regard this as particularly promising, because what we can do is take the lessons that we've learned in the former Soviet Union and elsewhere, and take the legal mandate of U.N. Security Council Resolution 1540, and in doing so, gather the resources in terms of personnel and national power and financial resources of other countries, and apply them to the nonproliferation problem. So, it's no longer the United States, and perhaps portions of the G8 that are bearing this burden alone, it becomes the responsibility of every nation to fight the proliferation problem. I think that's the way we will best meet the emerging threats that we're facing.

Senator REED. Thank you.

Mr. Benkert, your thoughts?

Mr. BENKERT. First of all, Mr. Chairman, I would wholeheartedly endorse what Mr. Tobey just said about the Global Initiative to counter nuclear terrorism. We have, in CTR, over the last 15 years, developed a great base of knowledge on practices, procedures, how to go about eliminating and destroying nuclear weapons, how to go about securing sites, developing the hardware and the procedures to do that.

I think, one of the things we want to do is to be able to apply this knowledge outside Russia and the former Soviet Union. The Global Initiative that Presidents Bush and Putin launched, I think, is a good vehicle for doing that. There may be others, as well, that we want to do, but I think one thing that it is, one area that we want to pursue is how we use this base of knowledge and experience that we have developed over the last 15 years, in Russia and the former Soviet Union, in a broader context.

The second is, the two relatively new components of CTR are the Proliferation Prevention Initiative which is the attempt to develop the capability to stop WMD and related materials on the move, for example, though border security initiatives. I think this is—we think this is particularly promising since, I think, in the future, one cannot assume that we will be able to get at weapons at their source, and we need to be able to stop them en route.

Then, of course, as we've discussed before, the biological piece of this, which I think is an area that deserves a great deal of attention, and we are providing attention to that.

Senator REED. Thank you very much.

Senator Dole.

Senator DOLE. Just one further question for Mr. Tobey. In March 2003—or 2005, I believe it was—DOE launched the GTRI, and it aims to identify secure radiological materials around the world against diversion for use in radiological dispersion devices. What is the status of this very important anti-terrorism initiative? Has the Department developed a strategy for prioritizing activities under this initiative, so that the material that poses the highest risk is dealt with and addressed first?

Mr. TOBEY. Senator Dole, this is a very important program, and our work there has been accelerating. We've taken to heart some of the advice we've received from outside of the Department. In terms of sites that have been secured over the last several years, in fiscal year 2003, we secured 8, in fiscal year 2004, it was 61, in 2005, 174, and 2006 it was 257. Cumulatively, we've secured over 520 sites. So, the work there is not only continuing, but accelerating, and I do believe it is fundamentally important.

We have developed a prioritization, and that's based on the type of material, how easily attainable it might be to a terrorist group, and also its proximity to assets that we care about the United States, or our allies or our friends. We use that prioritization to guide our efforts worldwide.

We are also working with the IAEA because they engage in similar work, to try and come up with prioritization that would be harmonized with ours. It may not be perfectly the same, but, in other words, to guide their practices as well. Because, you're certainly right that prioritization of the work is important.

Then, finally, this is an area where I think the Global Initiative to Combat Nuclear Terrorism can also play a role, because we can take this prioritization, present it to other nations, and hope to engage their efforts on this work, as well.

Senator DOLE. Thank you very much.

Thank you, Mr. Chairman.

Senator REED. Thank you, Senator Dole. Let me thank you for your participation. As always, your thoughtful questions and your insightful remarks.

I want to thank both Mr. Benkert and Mr. Tobey for your testimony. The record will remain open for 3 days for additional questions, which any of the panel might have for you gentlemen.

Thank you very much, and the hearing is adjourned.

[Whereupon, at 11:51 a.m., the subcommittee adjourned.]

DEPARTMENT OF DEFENSE AUTHORIZATION FOR APPROPRIATIONS FOR FISCAL YEAR 2008

WEDNESDAY, APRIL 25, 2007

U.S. SENATE,
SUBCOMMITTEE ON EMERGING THREATS
AND CAPABILITIES,
COMMITTEE ON ARMED SERVICES,
Washington, DC.

EFFORTS TO IMPROVE THE DEPARTMENT OF DEFENSE'S LANGUAGE AND CULTURAL AWARENESS CAPABILITIES

The subcommittee met, pursuant to notice, at 2:02 p.m. in room SR–325, Russell Senate Office Building, Senator Jack Reed (chairman of the subcommittee) presiding.

Committee members present: Senators Reed, Akaka, Warner, and Dole.

Majority staff members present: Evelyn N. Farkas, professional staff member; Richard W. Fieldhouse, professional staff member; and Arun A. Seraphin, professional staff member.

Minority staff members present: Michael V. Kostiw, Republican staff director; Lynn F. Rusten, professional staff member; and Kristine L. Svinicki, professional staff member.

Staff assistants present: David G. Collins, Jessica L. Kingston, and Benjamin L. Rubin.

Committee members' assistants present: Elizabeth King, assistant to Senator Reed; Sandra Luff, assistant to Senator Warner; and Lindsey Neas, assistant to Senator Dole.

OPENING STATEMENT OF SENATOR JACK REED, CHAIRMAN

Senator REED. If I could have your attention. First, let me thank all the exhibitors for a very interesting and informative exhibition and demonstration. It is quite impressive. I thank you all.

We will now call the hearing to order and I would begin my statement, but also indicate that Senator Akaka will be joining us. He has several other responsibilities, so I will suspend and recognize him immediately, with the kind concurrence of Senator Dole.

Today we meet to consider efforts to improve the Department of Defense (DOD) language and cultural awareness capabilities. I would like to welcome our witnesses. Our first witness is General Robert Scales, who is currently the President of Colgen, Inc. Gen-

eral Scales served for 30 years in the Army and is an outspoken advocate of language and cultural awareness in the military.

Representing the DOD is Deputy Under Secretary of Defense for Plans, Gail McGinn. Secretary McGinn is responsible for the development and implementation of the DOD's language policies.

Joining Secretary McGinn is Dr. André Van Tilborg, Deputy Under Secretary of Defense for Science and Technology. In this position, Dr. Van Tilborg has oversight over many of the DOD's important research efforts, including those in language, translation, and cultural awareness.

I also want to thank everyone from the various service agencies and commands who worked on the technology demonstration that we have here in the hearing room today. Some of these systems are related significantly to improving our capability in addressing operational shortfalls in the short-term, while we strive to more comprehensively improve the DOD's capabilities in this arena.

I want to especially thank the subcommittee staff assistant, Jessica Kingston, for her efforts in coordinating the demonstration and exhibits today. Jessica, you did a great job. I encourage all of our members, witnesses, and attendees to take the opportunity to examine some of these devices and learn about the ongoing research efforts.

At this point, it is appropriate in my text to stop and, Senator Akaka, if you would like to make your opening statement we would be more than willing to recognize you.

Senator Akaka.

Senator AKAKA. Thank you very much, Mr. Chairman. Thank you for this opportunity to present my statement. I want to thank Senator Dole for giving me this opportunity, too. Thank you, Mr. Chairman, for allowing me to speak briefly on this matter. I need to leave to chair a Veterans Affairs Committee hearing at 2 o'clock.

I applaud your leadership in holding today's hearing, Mr. Chairman, on the DOD's language and cultural awareness capabilities. This is a critical issue for national security and I appreciate your allowing me to participate here. As chairman of the Senate Oversight of Government Management Subcommittee and the Armed Services Readiness and Management Support Subcommittee, I have been very interested in how the Federal Government as a whole and DOD in particular are meeting their needs in both the short- and long-term. While DOD has made great strides to address this issue, more work needs to be done.

One issue I want to discuss is how DOD coordinates with other Federal agencies, industries, and stakeholders to address its language needs. In 2004, DOD held a national language conference and issued a White Paper summarizing the recommendations of the conference. The number one recommendation called for naming a senior Government official to lead the Government's foreign language education effort and establishing a council representing the broad spectrum of stakeholders to report on the Nation's language needs and propose actions to address them.

The White Paper also noted that all interested parties must be involved, as all sectors—government, industry, and academia—have a need for language-proficient individuals and no one sector has all of the solutions.

Last year the administration announced the National Security Language Initiative (NSLI) to coordinate efforts among the intelligence directorate and the Departments of Defense, Education, and State to address our national security language needs. However, NSLI and the National Security Education Program failed to address key recommendations made in the White Paper, namely ensuring that this effort can be sustained, taking in the advice of all Federal agencies, stakeholders, and addressing our common security needs, which also impacts our national security.

In January I chaired a hearing of the Senate Oversight of Government Management Subcommittee on the Federal Government's language strategy. Testimony from academia and foreign language groups said that there is a lack of coordination between NSLI partners and stakeholders. One witness commented that if there is a Federal language strategy, it is not well known.

Last year Senator Cochran and I were able to secure $1 million for DOD to implement the recommendations of the White Paper. As reflected in my language, the National Foreign Language Coordination Act, S. 4051, I am pleased that DOD is set to hold several regional summits to address language needs at the State and local level, as outlined in my bill. It is key that DOD is taking action, but more, again, more needs to be done.

I firmly believe that it is only through a cooperative plan of action and long-term leadership that we will address the Nation's language needs.

Thank you again, Mr. Chairman, for allowing me to participate today and to speak briefly on this issue. I do have a few questions that I will submit for the record.

Senator REED. Thank you very much, Senator Akaka. We all recognize your leadership role in several committees on these issues of language preparation, not just for the DOD, but for the Government as a whole. Thank you.

Let me conclude my statement and then recognize the ranking member, Senator Dole.

The December 2005 Defense Language Transformation Roadmap asserts in the introduction that: "Post-September 11 military operations reinforce the reality that the DOD needs a significantly improved organic capability in emerging languages and dialects, a greater competence in regional area skills in those languages and dialects, and a surge capacity to rapidly expand its language capabilities on short notice."

I am glad that the DOD recognizes this need, but wonder why it came about 4 years after September 11. Moreover, 6 years after September 11 and midway into the implementation of that roadmap, I am concerned that we still hear comments such as, "I am appalled at the Army's inability, and the Marine Corps also, to get language training." General Barry McCaffrey made that comment last week before this committee.

I understand that the DOD's investment in language capabilities has increased exponentially from what was being budgeted before September 2001 to what is being budgeted for the current fiscal year. If that is true, what have we gained from this investment and what level of investment is the Department planning to make to develop future capability?

I hope that at this hearing we can examine the shortfalls of the DOD's current approach to language and cultural awareness and that we can come away with some proposals about what additional steps the DOD should take and what programs or initiatives Congress should support.

I would like to hear from witnesses on their views regarding the role that research and development can play in enhancing our capabilities. I know that technology can play a big role in this, but I also know that it is not a silver bullet. I would like to explore how much of an emphasis we should be placing on these efforts, relative to other avenues as we seek to improve our operational capabilities.

The goal of all of us here is to ensure that our troops have the appropriate cultural and language skills to prevail, not just in the current fight against Islamic terrorism, but also in executing other military activities, including peacekeeping, military cooperation, training, and exchanges with foreign militaries, and deterrence of unneeded warfighting with a potential conventional enemy.

I want to thank the witnesses for being here. I look forward to a very engaging hearing. Now I would like to recognize Senator Dole.

Senator Dole.

STATEMENT OF SENATOR ELIZABETH DOLE

Senator DOLE. I certainly would like to join Senator Reed and Senator Akaka in welcoming our witnesses this afternoon. I would also like to thank everyone who has been involved in bringing us the great technology exhibits that we had a chance to view earlier. It truly helps us better understand the fruits of our science and technology (S&T) investments when we can view and touch the equipment and talk to the operators to hear how these devices help fulfill their missions.

The security environment since September 11 has reinforced the long-held principle that the United States must effectively use all instruments of national power to achieve our national security objectives. That means not only military capability, but it also means that diplomacy, foreign assistance, and economic tools are critical to our future security. Similarly, since September 11 we have relearned the lesson that to be effective the U.S. military must be skilled not only at conducting combat operations, but also at helping to prevent conflict and helping to transition from conflict situations to sustained peace and stability.

These activities require skills that are different from traditional warfighting skills. In the past few years, numerous Defense Science Board studies, outside experts, and DOD planning documents, including the 2006 Quadrennial Defense Review (QDR), have called for greater focus on creating and sustaining DOD's capabilities in stability, security, transition, and reconstruction operations. The critical element in those capabilities is the human factor, the ability of our military personnel to understand the environment in which they operate or are seeking to shape, to speak the language spoken in areas around the globe where they are deployed, and to understand the cultural norms of the people with whom they will be interacting in both friendly and hostile situations.

Today's hearing will focus on the efforts that DOD is making to improve the capabilities of its personnel in language and cultural awareness skills. The testimonies of General Scales, Mrs. McGinn, and Dr. Van Tilborg, regarding the DOD's requirements in these areas and how well the DOD is doing in identifying, prioritizing, and meeting those requirements are very important contributions to this discussion. Also, the degree to which S&T can help to meet the needs and compensate for shortfalls that exist today in the linguistic and cultural awareness fields that our military men and women need as they are deployed around the globe, particularly in Iraq and Afghanistan.

Your testimony will also help this subcommittee to determine if the proposed fiscal year 2008 and the future years defense budget reflect sufficient priority, resources, and authorities for this important capabilities.

Thank you all for your appearance today and for your service.

Senator REED. Thank you very much, Senator Dole.

Let me state that all of your statements have been included in the record. You may feel free to summarize. In fact, I would encourage you to summarize. At this point I would like to recognize General Scales.

General Scales.

STATEMENT OF MG ROBERT H. SCALES, JR., USA (RET.), PRESIDENT, COLGEN, INC.

General SCALES. Thank you, Senator Reed, and thank you, Senator Dole. I will take the hint and be uncharacteristically brief.

I think we can all agree that most of our shortcomings in recent wars have been human and not technological, and the list is long: cultural awareness, the ability to influence and shape opinions, indeed soldier conduct, information operations—the list goes on. What we have learned I guess, Senator, is that wars today are won as much by creating alliances and leveraging nonmilitary advantages, reading intentions, building trust, affecting opinions, and managing perceptions.

All of these demand an exceptional ability to understand people, their culture, and their motivations. My concern is that today's military has become so overstretched that it might become too busy to learn, in a time when the value of learning has never been greater for our military.

You asked me last week, Senator, to expand on this subject a little bit, approaching it from a strategic direction, and I would like to do that because I believe the problem is larger than merely learning language. I believe it is going to require a real transformation in how the DOD views war, that we move from a technocentric view of warfare to a culture-centric view of warfare, and that the human behavior, cognitive, and cultural aspects of warfare become as much a part of our lexicon, our research and development, training and education, as learning how to operate the machines is today.

So let me go down these very quickly. Cultural awareness. Language is important, but it is not the only important component to cultural awareness. Soldiers have to be able to move comfortably among alien cultures to establish trust and cement relationships

with others. The point, Senator, I'd like to make is not all will be fit for this kind of work. Some soldiers and marines remain committed to fight in any battle, and yet there are others, Senator, that I have seen in my many years that seek to have this cultural sense, this innate ability to sublimate ego, to communicate with alien cultures, even those who do not even speak the language, who have these special skills. We are seeing that play out every day in Iraq and in Afghanistan.

So language is important, but a culturally-aware military cannot achieve its goals merely by offering courses.

The other point I would make to you, Senator, is that militaries are by their nature oriented on merit. Those things which reward a soldier, a soldier will pay attention to. So I recommend that we reward those, find means to reward those who exhibit these special cultural skills. I do not believe an officer should be commissioned who has not had at least 2 years of language and cultural training. I do not believe any officer should be promoted to the grade of colonel unless he or she can demonstrate a working knowledge of a language.

One of the most important tasks that we face in the future is the ability to build alien armies and alliances. It is interesting because in the military we have always been very good at this. We have a remarkable, since the end of World War II, track record for building armies in places like Korea, Greece, Vietnam, El Salvador, and now Iraq.

But back on my point about merit, Senator, we do not reward those who have performed brilliantly as advisers and trainers and I think this must change. I think officers who have proven to be particularly effective as advisers should be promoted very early and selected for advance civil schooling to build on those skills that they have demonstrated while training foreign armies. I think a certain number of general officer billets must be reserved for them as they begin to progress through the ranks.

I believe that we must cultivate, amplify, research, and inculcate these skills in military and civilian educational institutions, perhaps institutions that are reserved specifically for that purpose.

The other issue deals with perception-shaping. Perception-shaping is an art, not a science, and in many ways the enemy does this better than we do. I believe that these are special skills—the ability to affect will and shape perceptions. I believe this is a task that is too big for the DOD. I believe it must be a national effort, superintended by distinguished academics and practitioners of the human, not the technological sciences.

One of the things we are learning is that, whereas when I was a lieutenant we expected colonels and generals to perform these tasks, what we are learning in Iraq and Afghanistan is we expect privates and corporals to be culturally aware. So I believe that we have to do a better job of inculcating knowledge and wisdom and teaching young men and women how to exhibit the indirect forms of leadership that are so important in performing these tasks.

The young man or woman walking point in a place like Baghdad needs to have this special training, not just in the language, but in the ability to communicate and understand alien cultures. I believe psychological and physiological tuning is important for these

functions. Again, some people can do them, some cannot. With only 16 weeks of basic training, we have to put the instruments in place, the scientific instruments in place, to find those and carefully select them who have these innate human, rather than technological skills.

I think we have to develop not just soldiers, but small units, that are good at this. The Marines have a great reputation for establishing these small civic action teams in places like Iraq, and also in Vietnam. So we have to be able to train small units to work in villages for prolonged periods of time, to commune with the people and be effective at that.

I think leadership and decisionmaking have to be addressed. It is not just being able to operate your weapon. It is also the ability to make key decisions, life-changing decisions, when you see a person standing on the end of a street corner to differentiate between an insurgent and a young Iraqi just out walking on the street.

I believe there is a higher element involved as well, Senator, and that is this idea of intuitive battle command. One of the mistakes, one of the shortcomings in this war, has been a rush to a kinetic solution. This is a problem in the chain of command, in the planning sequences, and in battle command. So I think issues like gut feel and intuition should replace the hierarchical and the old linear processes that you and I—that we have been operating under.

I think the ability to share information and to command by discourse rather than by formal orders are skills that we have to learn. I believe that we ought to build into our military not just the ability to go to the National Training Center and learn how to use our weapons at the brigade and battalion level; I believe that we ought to deal with the individual and the unit level as well, that we ought to have simulators that teach small unit leaders and soldiers how to make quick, split moment, split second decisions, that test the sort of intuitive right stuff, this gut feel ability to intuit the person's intentions. All these are very human, not technological skills.

Let me end by a brief recommendation. In fact, as you and others have said, so much of the human, cultural, and cognitive skills are scattered, not only throughout the DOD but throughout the government.

I really believe that we need an agency, a sort of social science corollary to something like the Defense Advanced Research Project Agency (DARPA), that can bring together not just the language part of cultural awareness, but the social, scientific, and the cognitive and behavioral aspects of it as well. I believe we need to bring together the best and the brightest from academia, the military and science institutions, corporations, Army Special Forces and Marine operating forces together. I think they ought to have the authority to conduct field experiments and studies in human performance using operational forces. I believe that they need to provide recommendations regarding selection, promotion, and schooling policies to the Secretary of Defense.

Just as the Defense Science Board holds annual summer studies to look at the physical sciences, I think this organization ought to hold similar studies to look across the board at the human, cultural, and cognitive sciences to be applied to the art of war.

I think they ought to have the same budgeting authority, directly from Congress, and would submit an annual assessment to Congress on the human, cultural, and cognitive aspects of the Services. I believe they ought to have a broad charter, and I believe that they ought to be able to establish criteria for language training, and I believe they ought to have an influence on how young officers are educated in alien cultures, language, and the art and science of war. I think this ought to be directed in nature, in the sense that they should be responsible for building this sort of new generation of officers that have these special human, cultural, and cognitive skills.

Finally, I believe they ought to affiliate with a major university with a solid reputation in the human and the social sciences.

Senator, thank you so much for the opportunity to talk to you.

[The prepared statement of General Scales follows:]

PREPARED STATEMENT BY MG ROBERT H SCALES, JR., USA (RET.)

Experience in Iraq and Afghanistan have proven that successful prosecution of the "Long War" is far more dependent on an intimate knowledge of the enemy's motivation, intent, will, tactical method and cultural environment than the deployment of smart bombs, unmanned aircraft and expansive bandwidth. Success rests with the ability of leaders to think and adapt faster than the enemy and for soldiers to thrive in an environment of uncertainty, ambiguity and unfamiliar cultural circumstances. Yet the military still remains wedded to the premise that success in war is best achieved by creating an overwhelming technological advantage. Our fixation on technology—our very technological success—has led us to believe that the soldier is a system and the enemy is a target. Soldiers are now viewed, especially by this U.S. Department of Defense (DOD), as an "overhead expense," not a source of investment.

Viewing war too much as a contest of technologies, we have become impatient and detached from those forms of war that do not fit our paradigms. Techno-centric solutions are in our own cultural DNA. Thus it is no wonder that transformation has been interpreted exclusively as a technological challenge. So far we have spent billions to gain a few additional meters of precision, knots of speed or bits of bandwidth. Now we must commit resources to improve how the military thinks and acts in an effort to create a parallel transformational universe based on cognition and cultural awareness.

Reflective senior officers returning from Iraq and Afghanistan have concluded that great advantage can be achieved by out thinking rather than out equipping the enemy. They are telling us that wars are won as much by creating alliances, leveraging non military advantages, reading intentions, building trust, converting opinions and managing perceptions, all tasks that demand an exceptional ability to understand people, their culture and their motivation. Yet these same commanders lament that they are obliged to subordinate learning about war to the practical and more pressing demands of routine day-to-day operations. In a word, today's military has become so overstretched that it may become too busy to learn at a time when the value of learning has never been greater.

What follows is a partial list of initiatives that collectively will cost little but if taken together will increase American combat proficiency far out of proportion to its cost. Implementing only a few of these initiatives will go a long way to creating an environment conducive to fighting an enemy in this emerging era of culture-centric warfare.

CULTURAL AWARENESS

In Iraq, a curtain of cultural ignorance continues to separate the good intentions of the American soldier from Iraqis of good will. Inability to speak the language and insensitive conduct become real combat vulnerabilities that the enemy has exploited to his advantage. The military of the future must be able to go to war with enough cultural knowledge to thrive in an alien environment. Empathy will become a weapon. Soldiers must gain the ability to move comfortably among alien cultures, to establish trust and cement relationships that can be exploited in battle. Not all are fit for this kind of work. Some will remain committed to fighting the kinetic battle. But others will come to the task with intuitive cultural court sense, an innate abil-

ity to connect with other cultures. These soldiers must be identified and nurtured just as surely as the Army selects out those with innate operational court sense.

Social science can help select soldiers very early who possess social and cultural intelligence. Likewise, scientific psychology can assist in designing and running cultural immersion institutions that will hasten the development of culturally adept soldiers and intelligence agents. Cultural psychology can teach us to better understand both common elements of human culture and how they differ. An understanding of these commonalities and differences can help gain local allies, fracture enemy subgroups, avoid conflicts among allies, promote beneficial alliances, and undermine enemy alliances.

A culturally aware military cannot be achieved just by offering language courses. Language ability is a means to an end to be sure. But the goal of a program designed to enhance cultural awareness must focus on identifying and rewarding those who exhibit these special cultural skills. No officer should be commissioned who has not had at least 2 years of language training. No officer should be promoted to colonel unless he or she can demonstrate a working knowledge of language spoken by peoples who inhabit threatened regions of the world. The fitness or efficiency reports of the services must be amended to include an assessment of these special talents.

BUILDING ALIEN ARMIES AND ALLIANCES

The Long War will be manpower-intensive. The U.S. cannot hope to field enough soldiers to be effective wherever the enemy appears. Effective surrogates are needed to help us fight our wars. The Army has a long tradition of creating effective indigenous armies in such remote places as Greece, Korea, Vietnam, El Salvador, and now Iraq. But almost without exception, the unique skills required to perform this complex task have never been valued, and those who practice them are rarely rewarded. Today's soldiers would prefer to be recognized as operators rather than advisers. This must change. If our strategic success on a future battlefield will depend on our ability to create armies from whole cloth—or, as in Iraq, to remove an army that has been part of the problem and make it a part of the solution—then we must select, promote and put into positions of authority those who know how to build armies. Officers who have proven to be particularly effective as advisors in Iraq should be promoted very early and selected for advanced civil schooling. When these officers advance to senior rank a specific number of general officer billets must be reserved for them. We must cultivate, amplify, research and inculcate these skills in military and civilian educational institutions reserved specifically for that purpose.

PERCEPTION SHAPING AS ART, NOT SCIENCE

People in many regions of the world hate us. They have been led to these beliefs by an enemy whose perception-shaping effort is as brilliant as it is diabolical. If the center of gravity in the Long War is the perception of the people, then perhaps we should learn how the enemy manipulates the people. Information technology will be of little use in this effort. Damage is only amplified when inappropriate, culturally insensitive or false messages are sent over the most sophisticated information networks. Recent advances in the social psychology of leadership and persuasion can help train soldiers to win acceptance of local populations and obtain better intelligence from locals. Recent cognitive behavioral therapy has documented remarkably effective techniques for countering fear and abiding hatred such as we see in the Middle East. Our challenge is to create a human science intended specifically for shaping opinions, particularly among alien peoples. This task is too big for a single service or event for the DOD. It must be a national effort superintended by distinguished academics and practitioners in the human sciences who understand such things, rather than by policymakers who have proven in Iraq that they do not.

INCULCATE KNOWLEDGE AND TEACH WISDOM

In Iraq and Afghanistan, junior soldiers and marines today are asked to make decisions that in previous wars were reserved for far more senior officers. A corporal standing guard in Baghdad or Fallujah can commit an act that might well affect the strategic outcome of an entire campaign. Yet the intellectual preparation of these very junior leaders is no more advanced today than it was during World War II. However, the native creativity, innovativeness and initiative exhibited by these young men and women belie their woeful lack of intellectual preparation.

Learning to deal with the human and cultural complexities of this era of war will take time. Leaders, intelligence officers, and soldiers must be given the time to immerse themselves in alien cultures and reflect on their profession. Yet in our haste to put more soldiers and Marines in the field, we risk breaking the intellectual institutions that create opportunities to learn. Today, we are contracting out our need

for wisdom by hiring civilians to teach in military schools and colleges. Educational science has long understood that reading and listening are the least effective means for retaining or increasing knowledge. Teaching is at least an order of magnitude more effective, while researching and writing are far better still. Thus the Services must change assignment and promotion policies to make learning and teaching professionally rewarding.

TACTICAL INTELLIGENCE

The value of tactical intelligence—knowledge of the enemy's actions or intentions sufficiently precise and timely to kill him—has been demonstrated in Iraq and Afghanistan. Killing power is of no use unless a soldier on patrol knows who to kill. We should take away from our combat experience a commitment to leverage human sciences to make the tactical view of the enemy clearer and more certain, to be able to differentiate between the innocents and the enemy by reading actions to discern intentions.

The essential tools necessary to make a soldier a superb intelligence gatherer must be imbedded in his brain rather than placed in his rucksack. He must be taught to perceive his surroundings in such a way that he can make immediate intuitive decisions about the intentions of those about him. His commanders must be taught to see the battlefield through the eyes of his soldiers. He must make decisions based on the gut feel and developed intuition that come from an intelligence gatherer's ability to see what others cannot. There is a growing science of intuition and gut feeling, and these capabilities might be enhanced by this new capability and its allied technology. Machines and processes might make intelligence easier to parse and read. But knowing the enemy better than he knows us is inherently a psycho-cultural rather than a technological, organizational, or procedural challenge.

PSYCHOLOGICAL AND PHYSIOLOGICAL TUNING

Life sciences offer promise that older, more mature soldiers will be able to endure the physical stresses of close combat for longer periods. This is important because experience strongly supports the conclusion that older men make better close-combat soldiers. Scientific research also suggests that social intelligence and diplomatic skills increase with age. Older soldiers are more stable in crisis situations, are less likely to be killed or wounded and are far more effective in performing the essential tasks that attend to close-in killing. Experience within special operations units also suggests that more mature soldiers are better suited for fighting in complex human environments. Science can help determine when soldiers are at their cognitive peak. Psychological instruments are available today to increase endurance and sustained attention on the battlefield. Today, conditioning science has succeeded in keeping professional athletes competitive much longer than even a decade ago. These methods should be adapted to prepare ground soldiers as well for the physical and psychological stresses of close combat.

DEVELOP HIGH PERFORMING SOLDIERS AND SMALL UNITS

Close combat has always been a personal and intimate experience. Close combat is the only skill that cannot be bought off the street or contracted out. In all of our world wars, success of campaigns has been threatened by a shortage of first rate, professional infantrymen. Inevitably, a protracted campaign drains the supply of intimate killers. Many infantrymen are sent into close combat with about 4 months' preparation. What little social science the research and development community has devote to understanding the human component in war has not been spent on close-combat soldiers. We know far more about pilot and astronaut behavior than we do about those who in the next world war will do most of the killing and dying, the close-combat soldiers. If dead soldiers constitute our greatest weakness in war, then we should, as a matter of national importance, devote resources to making them better.

The enemy has drawn us unwillingly into fighting him at the tactical level of war where the importance of technology diminishes in proportion to the value of intangibles. Thus, winning the Long War will require greater attention to the tactical fight. Technology will play a part, to be sure. Our small units, squads, and platoons should be equipped with only the best vehicles, small arms, sensors, radios, and self-protection. But more important to victory will be human influencers such as the selection, bonding, and psychological and physical preparation of tactical units.

As the battlefield expands and becomes more uncertain and lethal, it also becomes lonelier and enormously frightening for those obliged to fight close. Most recent American campaigns have been fought in unfamiliar and horrifically desolate terrain and weather. Modern social science offers some promising solutions to this

problem. Recently, we have learned that soldiers can now be better tuned psychologically to endure the stresses of close combat. Tests, assessments, role-playing exercises, and careful vetting will reduce the percentage of soldiers who suffer from stress disorders after coming off the line.

Cognitive sciences can be leveraged to enhance small-unit training in many ways, from speeding the acquisition and enhancing the retention of foreign languages to training soldiers in command decisionmaking simulators to sharpen the ability to make decisions in complex tactical situations. Cognitive sciences can be employed in the creation of highly efficient and flexible training programs that can respond to the ever-changing problems. Models of human cognition can also be used to diagnose performance failures during simulated exercises. These measures can assist in training soldiers to attend to hidden variables and to properly weigh and filter the many factors that determine optimal performance in complex decisionmaking tasks.

But the social sciences can accelerate the process for building great small units only so much. The one ingredient necessary for creating a closely bonded unit is time. The aging of a good unit, like that of a good wine, cannot be hurried. Platoons need at least a year to develop full body and character. Because the pipeline will be so long and the probability of death so great, the ground services must create many more close-combat units than conventional logic would demand. The lesson from Iraq and Afghanistan is clear: In future wars we can never have too many close-combat units. The performance of small ground units will be so critical to success on the World War IV battlefield that we should replace Cold War methods of mass producing small units and treat them more like professional sports teams with highly paid coaching and dedicated practice with the highest quality equipment and assessment methods.

LEADERSHIP AND DECISIONMAKING

The Long War will demand intellectually ambidextrous leaders who are capable of facing a conventional enemy one moment, then shifting to an irregular threat the next moment before transitioning to the task of providing humanitarian solace to the innocent. All of these missions may have to be performed by the same commander simultaneously. Developing leaders with such a varied menu of skills takes time.

There are precedents for developing these skills. In Vietnam, the air services developed "Top Gun" and "Red Flag" exercises as a means of improving the flying skills of new pilots bloodlessly before they faced a real and skilled opponent. Recent advances in the science of intuitive decisionmaking will give the ground services a similar ability to improve the close-combat decisionmaking skills of young leaders. Senior commanders will be able to use these tools to select those leaders with the intuitive right stuff. Over time, leaders must be given the tools to measure and assess improvements in their ability to make the right decisions in ever more complex and demanding combat situations. They should also have access to coaches and mentors who will pass on newly learned experiences with an exceptional degree of accountability and scientific precision.

INTUITIVE BATTLE COMMAND

The Army and Marine Corps learned in Afghanistan and Iraq that operational planning systems inherited from the Cold War would no longer work against an elusive and adaptive enemy. They were forced to improvise a new method of campaign planning that emphasized the human component in war. Gut feel and intuition replaced hierarchical, linear processes. They learned to command by discourse rather than formal orders. Information-sharing became ubiquitous, with even the most junior leaders able to communicate in real time with each other and with their seniors.

Dedicated soldier networks have fundamentally altered the relationship between leaders and led and have changed forever how the Army and Marine Corps command soldiers in battle.

Developing new and effective command-and-control technologies, doctrine and procedures will do no good unless we educate leaders to exploit these opportunities fully. We have only begun to leverage the power of the learning sciences to battle command. Teaching commanders how to think and intuit rather than what to think will allow them to anticipate how the enemy will act. Convincing commanders to leave Cold War-era decisionmaking processes in favor of nonlinear intuitive processes will accelerate the pace and tempo of battle. The promise is enormous. But we will only achieve the full potential of this promise if we devote the resources to the research and education necessary to make it happen.

CULTURAL AND COGNITIVE TRANSFORMATION

The relationship between the military and human and behavioral scientists has, to date, been one of antipathy and neglect. Academics and behavioral practitioners have rarely violated the turf of the soldier. Many are turned off by the prospects of relating their professions to war. But most take the war against terrorism seriously. If the Army and Marine Corps give them the opportunity, they will gladly turn the best of their sciences to the future defense of our Nation.

We are in a race, and the times demand change. The Long War can only be won by harnessing the social and human sciences as the essential amplifiers of military performance, just as the physical sciences were the amplifiers of past world wars. Such a shift in how the defense community approaches war will require a fundamental shift in military culture.

There is an old saying that the Navy and the Air Force man the equipment and the Army and Marine Corps equip the man. Surely those services that focus on the man rather than the machine should receive a disproportionate share of future defense budgets. Unfortunately, the ground services are far too committed and engaged in fighting this war to prepare adequately for the next. They need help. We can open a new cognitive and cultural transformational front by establishing a Human, Cultural and Cognitive Agency that will:

- Become a social science corollary and be similar in structure and purpose to The Defense Advanced Research Projects Agency (DARPA).
- Be headed by a person credentialed and esteemed in the human, cultural, and cognitive scientific communities.
- Bring together the best and brightest from academia, the military human science institutions, corporations and the Army, Special Forces and Marine Corps operational forces.
- Have authority to conduct field experiments and studies in human performance using operational forces.
- Provide recommendations regarding selection, promotion, and schooling to Secretary of Defense.
- Hold an annual summer study similar to the Defense Science Board in which members from corporations, the Services, and academia would meet to offer advice to the Secretary of Defense on issues related to the human sciences.
- Have distinct budgeting authorities directly from Congress and would submit an annual assessment to Congress on the human, cultural and cognitive performance of the services, particularly the ground services.
- Be given a broad charter that would include: cultural awareness training and education; perception and opinion shaping; in extremis decisionmaking in war; small unit and individual performance; intelligence analyst training and education; intuitive battle command; individual combat performance assessment and measurement; psychological tuning and hardening; language science, among many other subjects and initiatives.
- Establish criteria for, fund and manage a program of advanced civil schooling in cultural awareness and the art of war for officers in the ground services. Officers selected for cultural and cognitive degrees would come principally from the operational forces and upon completion of study would be utilized principally in command and staff billets in Marine and Army fighting units. Officers completing these degrees would gain full joint credentialing through the grade of colonel.
- Affiliate and locate with a major university with a solid reputation in human and social science.

We cannot expect the scientific and bureaucratic institutions that won two world wars and the Cold War by exploiting the physical sciences to easily embrace a social and human sciences approach to the same challenges. But the wars in Iraq and Afghanistan clearly prove that a human approach to future wars is now our most glaring shortcoming and greatest challenge. Transformation in the human dimension will take resources and time. The shortest commodity is time. We must begin immediately to put in place the structures that will optimize what little time we have available.

Senator REED. Thank you, General, for your always thoughtful and important remarks. Thank you very much, sir.

Secretary McGinn?

STATEMENT OF HON. GAIL H. MCGINN, DEPUTY UNDER SECRETARY FOR PLANS, DEPARTMENT OF DEFENSE

Mrs. MCGINN. Mr. Chairman, thank you for allowing me to appear today to discuss the DOD's efforts to improve our capability in foreign language and regional expertise. The subcommittee's interest in this topic is very much appreciated. My colleague, Dr. Van Tilborg, will cover matters relating to technology, so I will discuss the human aspect of the defense language program.

We welcome the advances that technology brings us, but we do not think that technology will overcome the need for people with knowledge of languages, regions, and cultures. For the past 5 years we have been actively engaged in coming to understand our foreign language needs and have been working to address those needs.

The DOD has always required people to be interactive in foreign languages, but today's needs are very different from those of the Cold War. At that time language needs were predictable and we focused on languages like Russian and German. Today's emphasis on irregular warfare, building partnerships with foreign countries, development of capability and stability operations, not to mention the effort of the long war, bring the need for foreign language proficiency to the fore, and not just foreign language proficiency, but regional and cultural expertise as well.

We must be able to react quickly and globally and provide our forces with the capabilities they need. Indeed, these things must become core competencies of the force.

As noted in my written statement, we are actively pursuing three courses of action to meet our competency needs in foreign language and regional expertise. First, we are moving to find, build, and manage a foundational corps of servicemembers with language ability. We are assessing every servicemember to ascertain language skills. In so doing, we have discovered a wealth of languages that we did not know we had in the force, including indigenous languages of Africa and significant numbers of Chinese speakers.

We have reoriented and upgraded the training we offer at Defense Language Institute (DLI)-Foreign Language Center to ensure that we are teaching the right languages to the right proficiency levels. Indeed, we have dramatically increased their funding so they can increase the proficiency levels of the students they graduate there to meet today's needs.

We have increased the language focus of our military academies and are beginning to move it into Reserve Officer Training Center (ROTC). We are providing language and cultural training to deploying forces. The goal is to have on hand a robust foundation that can deploy quickly, with the right clearances, the right proficiency, and the right languages.

Second, since we cannot have a standby force of sufficient size to handle all the language needs that might occur, we are improving our ability to surge to support operational requirements. The Army as our executive agent manages a contract to supply linguists to deployed forces.

We also use reach-back capabilities for translation and we are exploring these capabilities for interpretation as well. In the future, we will also be relying on our language corps, a corps of Americans who have agreed to come and help with their language skills when

called. We have just awarded a contract to begin building this corps, which is also included in the President's NSLI.

Third, we need to build a cadre of individuals with high levels of language proficiency, who are better able to function in today's environment and interact with our foreign partners.

We are especially proud of the work the military departments have done to expand our foreign area officer program. The foreign area officers are our uniformed experts who possess a combination of strategic focus, regional expertise, cultural awareness, and high level foreign language proficiency. We currently have 1,600 foreign area officers active or in training, principally from the Army and the Marine Corps. The Air Force and the Navy are building this capability and will add significant numbers to our overall count in the years to come. Together the Services will bring on 995 new foreign area service officers by 2012.

In addition, I would like to highlight our DLI-Foreign Language Center. That is the centerpiece of our foreign language program. The DLI teaches basic language instruction to 4,000 servicemembers a year. It used to be focused on providing training for cryptolinguists for the Intelligence Community, but has evolved in recent years to provide strong support for our warfighters by deploying mobile training teams to conduct pre-deployment training and providing training materials for use by deploying forces.

Mr. Chairman, I would be remiss if I did not mention that increasing foreign language capability is not just a DOD issue, it is a national issue as well. As a Nation we have not enthusiastically accepted the value of foreign language as an important competency for Americans to possess. At the DLI, we bring in high school graduates who may never have spoken a foreign language and teach them to be fairly proficient in Arabic in 63 weeks. We could do much better if they came to us already having studied any language.

As Senator Akaka stated, we have joined with the Department of Education, the Department of State, and the Director of National Intelligence in the implementation of the NSLI for strategic languages in America. We view this as a high priority initiative in support of our overall program and intend to continue our efforts to highlight the importance of knowing other languages and cultures, not just because it matters to us, but frankly because it matters to our country in the global economy.

We have done a lot, but much remains to be done. We need to sustain momentum and build on past progress. We are very much appreciative of your interest and support.

That concludes my statement.

[The prepared statement of Mrs. McGinn follows:]

PREPARED STATEMENT BY HON. GAIL H. MCGINN

INTRODUCTION

Mr. Chairman and members of this distinguished subcommittee, thank you for the opportunity to speak on this very important topic.

Today, the Department of Defense (DOD) is engaged in two very important efforts. We are transforming how the DOD values, employs, and deploys foreign language capability and regional expertise. During the planning phase, we identified the need for a deeper national language talent pool from which we can recruit and exploit during times of surge. In an effort to respond to the growing need for lan-

guage and regional expertise, we are supporting the National Security Language Initiative (NSLI), launched by President Bush in January 2006.

Foreign language and regional expertise, which includes cultural awareness, are emerging as key competencies for our 21st century Total Force. The Active-Duty, National Guard, Reserve, and civilian personnel, along with our supporting contract personnel, understand that these essential skills are needed for mission accomplishment. We have overcome many obstacles and made good progress, and the transformation that has occurred is apparent across the entire DOD, but there is still work to be done.

Language skills are not easily acquired and, once acquired, are not universally applicable to all regions within a country or situation. Regional expertise requires continuous learning to stay current in an ever-changing world environment. As judicious planners and good stewards, we constantly assess the relevance of what we are doing today with what we might be called to do in the future.

THE NEED FOR CHANGE

Current military operations demand different skills than those that were mastered to win the Cold War. Today's operations increasingly require our forces to operate with coalition and alliance partners and interact with foreign populations, in a variety of regions, with diverse languages and cultures. Our enemies blend in with the local population, making identification and achieving victory more difficult. To be effective in stability, security, transition, and reconstruction operations, as well as other counterinsurgency measures and to prevail in the long war, we must be able to understand different cultures and communicate effectively in order to gain the support of the local people.

We have responded to this shifting paradigm with a shift in strategy. Operational lessons learned and studies stressed the need for the DOD to create and maintain language capabilities within the force and have the ability to surge on demand to meet unexpected challenges. The Strategic Planning Guidance for fiscal years 2006 through 2011 directed development of a comprehensive roadmap to achieve the full range of language capabilities necessary to carry out national strategy. The result was the 2005 DOD Language Transformation Roadmap (DLTR) that continues to be the pivotal document for our accomplishments today.

Leadership has continued to reinforce the importance of foreign language and regional expertise within the 21st century Total Force. The 2006 Quadrennial Defense Review (QDR) provides approximately $430 million through the Future Years Defense Program, with $66.7 million in the fiscal year 2008 President's budget request for initiatives to strengthen and expand our Defense Language Program. These initiatives span across technology, training, education, and recruitment and include the Army Heritage Speaker (09L) Program, Service Academy Language Training Programs, Foreign Language Proficiency Pay, Reserve Officer Training Center (ROTC) Language Training Grants, Accession Screening Program, the Language Corps, National Security Education Program (NSEP), and the Defense Language Institute Foreign Language Center (DLIFLC).

The Strategic Planning Guidance for fiscal years 2008 through 2013 outlines the national commitment to developing the best mix of capabilities within the Total Force and sets forth a series of roadmaps that support the goals of the DLTR.

MANAGING CHANGE

The DLTR, signed by the Deputy Secretary of Defense on February 14, 2005, is our management guide for building language skills and regional proficiency into today's force. The roadmap provides broad goals that will ensure a strong foundation in language, regional and cultural expertise, a capacity to surge to meet unanticipated demands, and a cadre of language professionals.

To ensure oversight, execution, and direction for this transformation, the Deputy Secretary assigned the Under Secretary of Defense for Personnel and Readiness responsibility for the Defense Language Program. The Deputy Secretary then directed the appointment of Senior Language Authorities in the military departments, the defense and joint staffs, defense agencies, and defense field activities at the Senior Executive Service, and general and flag officer ranks to ensure senior-level involvement and oversight. We established the Defense Language Steering Committee, consisting of the Senior Language Authorities, to act as an advisory board and guide the implementation of the roadmap. The Under Secretary of Defense for Personnel and Readiness appointed me as the DOD Senior Language Authority and Chair of the Defense Language Steering Committee. We revised the DOD Directive for the Defense Language Program and established the Defense Language Office to ensure

oversight and execution of the DLTR and to institutionalize the DOD's commitment to these critical competencies.

CREATE FOUNDATIONAL EXPERTISE: BUILDING COMPETENCIES FOR THE 21ST CENTURY TOTAL FORCE

A critical initiative of the DLTR involved determining what capabilities and resources were needed. The combatant commands, military Services, defense agencies, and defense field activities began identifying the language and regional expertise requirements necessary to support their operational and contingency planning and day-to-day requirements.

The military Services and Joint Staff initiated reviews of all relevant doctrine, policies, and planning guidance to ensure that they incorporated language and regional expertise to include cultural awareness. These documents help us outline the approach for developing and, more importantly, employing these warfighting and peacekeeping competencies.

There had been no accurate assessment of what languages and proficiency levels existed within the total force. The DOD is now conducting a self-assessment of in-house language capability and we have learned that we have a significant capability not apparent to our management systems. Even though our assessment is not yet complete, as of the beginning of the current fiscal year, the DOD had 141,887 Active-Duty component; 77,319 Reserve component; and 38,246 civilian members of the Total Force who reported having foreign language skills. We now have policies in place so that individuals are routinely screened as part of the military accession and civilian hiring process.

In order to encourage servicemembers to identify, improve, and sustain language capability, we implemented a revised Foreign Language Proficiency Pay (FLPP) policy, and, with the support of Congress, increased the proficiency bonus from $300 maximum per month, up to $1,000 maximum per month for uniformed members. We are currently finalizing the DOD Foreign Language Proficiency Bonus (FLPB) policy to align payment for Reserve and Active-Duty components by increasing Reserve proficiency pay ceiling from $6,000 to $12,000, consistent with section 639 of Public Law 108–163, the National Defense Authorization Act for Fiscal Year 2006. DOD policy for civilians assigned to non-intelligence positions allows FLPP of up to 5 percent of an employee's salary when duties require proficiency in a foreign language identified as necessary to meet national security concerns and the employee is certified as proficient in that language. The use of FLPP for civilians is also available within the Intelligence community and the National Security Personnel System (NSPS). Intelligence career field personnel and civilian personnel covered by NSPS may receive up to $500 per pay period provided the language proficiency facilitates performance of intelligence duties or is deemed necessary for national security interest.

Building A "Learning" Organization To Strengthen The Foundation

Of the many occupational skills taught to our personnel, language and regional expertise are among the more difficult to address in a systematic manner. Learning a foreign language is not easy and proficiency deteriorates, if not maintained. The strategic languages we seek, such as Arabic, are some of the most difficult and take a long time to develop.

Regional expertise involves understanding complex issues in areas such as political, military/security, economic, sociological to include history and religion, scientific/technical, the geographic terrain, and, most importantly the cultural norms of a region. It takes time and continuous study to ensure current and relevant knowledge as countries and regions change over time. We must fully understand how to identify and catalog our regional expertise capability as we have with language. Regardless, of the challenge, we do know that every warfighter needs fundamental language skills and cultural awareness with a cadre of experts needing higher levels of proficiency, depending on the jobs and missions being performed.

In addition, there are risks associated with selecting the languages and regions that should be taught or emphasized. Unlike other primary job skills, language and regional expertise do not necessarily transfer from one theater of operation to another. It is impossible to foresee with certainty where we will operate in deployment or contingency operations in the future and we must cultivate the capability of responding quickly to the unexpected, such as we did when Operation Enduring Freedom required a rapid development of curriculum in Dari and Pashto.

To acquire and sustain these capabilities, the DOD must commit to building and sustaining a "learning organization" that offers mission-focused instruction to all personnel at the appropriate times, with the appropriate delivery method such as deploying training technology, to support our people in maintaining and enhancing

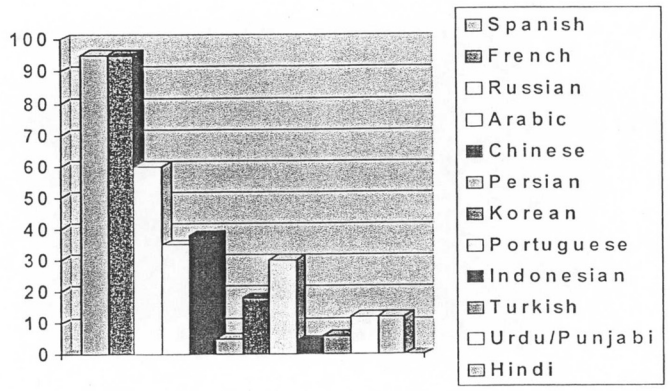
these hard won skills. This learning begins even before potential recruits join the Total Force.

Pre-Accession Language Training

Pre-accession language training focuses the DOD's effort on building language skills in future officers prior to commissioning. The three Service Academies enhanced their foreign language study programs to develop pre-accession language and cultural knowledge. They expanded study abroad, summer immersion and foreign academy exchange opportunities; and added instructor staff for strategic languages. The United States Military Academy and the United States Air Force Academy now require all cadets to complete two semesters of language study; and the United States Naval Academy requires its non-technical degree-seeking midshipmen to take four semesters of language study. Language study programs have regional information such as socio and geo-political considerations and key aspects of culture embedded in the course of study. The United States Military Academy and the United States Air Force Academy also established two new language majors of strategic interest, specifically in Arabic and Chinese. The United States Naval Academy, for the first time in history, will offer midshipmen the opportunity to major in a foreign language, including Arabic and Chinese beginning with the class of 2010. In fiscal year 2007, $25.57 million was directed to the Service Academies to develop and implement their language programs, including curricular development and hiring of staff and faculty to teach more strategic languages. President's budget request for fiscal year 2008 is for $16.95 million.

The Academies are aggressively pursuing increased opportunities for their cadets and midshipmen to study abroad to reinforce both their acquired language and culture knowledge, and currently have programs available in 40 countries. Four-week summer language immersion programs are offered as well as semester exchanges with foreign military academies. The National Defense Authorization Act for Fiscal Year 2007 allows the Academies to expand these exchanges from 24 exchanges to 100 exchanges per academy per year, and this congressional support is greatly appreciated.

ROTC cadets and midshipmen also have expanded opportunities to learn a foreign language. The Air Force and Navy have ROTC students accompany their academy counterparts during familiarization and orientation travel opportunities. Of the 1,321 colleges and universities with ROTC programs, 1,148 offer languages as noted on this chart. Significantly, many of the languages we need for current operations are not widely offered at this time.



Percentage of ROTC Cadets with Access to Foreign Language Instruction

The DOD has just awarded four grants to colleges and universities with ROTC programs. This is a pilot program started this year to provide grants to select colleges and universities with established ROTC programs to expand opportunities for ROTC cadets and midshipmen to study languages and cultures critical to national security. Increasing the number of less commonly taught languages in college curricula remains a challenge in which we are actively engaged.

Primary Skills Language Training

There are dramatic changes in how the DOD is training members who require language skills to perform their primary jobs. The DLIFLC's budget climbed from $77 million in fiscal year 2001 to $203 million in fiscal year 2007 to better respond to these changes. The Institute has an enrollment of 4000 students a year. Since the September 11, 2001, terrorist attacks, we have redirected training toward the strategic languages, such as Arabic, Chinese and Persian Farsi. One of the major programs implemented in fiscal year 2006 by DLIFLC is the Proficiency Enhancement Program (PEP). PEP is designed to graduate students at increased proficiency levels. Changes include reducing the student-to-instructor ratio, increasing the number of classrooms, creating improved expanded curricula, and expanding overseas training. Cultural awareness has also been added to every language course.

A critical component of our effort to improve the language capability is to validate and deliver tools for measuring language proficiency. We have taken steps to strengthen our Defense Language Testing System by updating test content and delivery. The Services and Defense Agencies are taking the same test, thus we are able to use the test scores to calculate a Language Readiness Index and determine the gaps. We can then target our recruiting, training, and other interventions to reduce these gaps. Delivering these tests over the Web is greatly increasing the availability and accessibility of these tests to Defense military and civilian language professionals worldwide, and the use of advanced technology to store and track proficiency test scores is providing us with the capability to use this information for national security planning. Currently we have delivered over 11,000 web-delivered tests to date.

Supporting Deploying Forces

The DOD recognizes that not all personnel will be able or required to demonstrate intermediate or advanced level language skills and regional expertise; as technology can help meet some of these demands. As directed in the DLTR, and in my role as the DOD Senior Language Authority, I am working with the Office of the Under Secretary of Defense for Acquisition, Technology, and Logistics to establish a coherent, prioritized, and coordinated DOD multi-language technology research, development, and acquisition policy and program. This technology, such as machine translation tools, will aid in bridging the gaps when the desired capability is not available. However, regardless of how advanced the technology, it cannot replace the need for servicemembers to personally acquire the language skills and cultural knowledge to effectively interact with the local people and leaders. Department policy, therefore, requires that military units deploying into, or in transit through foreign territories shall be equipped, to the greatest extent practicable, with an appropriate capability to communicate in the languages of the territories of deployment or transit and to operate with an appropriate knowledge of the cultural norms.

The Services have taken great efforts to prepare members to achieve optimum outcomes by understanding the regions in which they deploy and being culturally aware. All the Services have incorporated regional and cultural information within Professional Military Education (PME) curricula. The Services established Centers of Excellence to oversee and standardize training and impart essential and mission-targeted cultural training to their members. The Army Training and Doctrine Command Culture Center, the Navy Center for Language Regional Expertise and Culture, the Air University Cultural Studies Center, and the Marine Corps Center for Advance Operational Culture and Language all focus on offering the training that best supports their deployment model and is compliant with Joint Professional Military Education guidelines. Since Service missions differ, this approach is logical and effective.

We will host a DOD-wide Culture Summit this summer. This forum will serve as the foundation to develop operationally relevant cultural policies and synchronize efforts across all the Services.

Getting the right information to deploying personnel in time to be useful, but not so early that it is forgotten before they arrive, is "just-in-time" training. We have significantly improved our means of providing language and regional familiarization training to units during their deployment cycles. The DLIFLC's foreign language and cultural instruction extends beyond the classroom to servicemembers and civilians preparing for deployment by offering mobile training teams, video teletraining, language survival kits, and online instructional materials. Since 2001, the DLIFLC dispatched 300 mobile training teams to provide targeted training to more than 32,000 personnel. Deploying units received over 200,000 Language Survival Kits (mostly Iraqi, Dari, and Pashto). Field support modules outlining the geo-political situation, cultural facts, and fundamental language skills, key phrases and commands are available for 19 countries in 17 languages on the DLIFLC website. There

are 31 on-line language survival courses. Computer-based sustainment training is available as well via the Global Language On-line Support System, which supports 12 languages and 6 more language sustainment courses are available on the DLIFLC LingNet Web site.

Heritage Recruiting

Ensuring that we have a strong foundation in language and regional expertise involves reaching out to personnel who already possess these skills into our Total Force. All of our military Services have developed heritage-recruiting plans to bring personnel into the force with key language skills and regional expertise. These plans focus on reaching out to our heritage communities and their children who possess near-native language skills and knowledge of the culture.

One particularly successful program is the Army's 09L Interpreter/Translator Program. The Army launched this pilot program in 2003 to recruit and train individuals from heritage Arabic, Dari, and Pashto communities to serve in the Individual Ready Reserve and support operations in Iraq and Afghanistan. The program was so successful that in 2006, the Army formally established the 09L Translator Aide as a permanent military occupational specialty with a career path from recruit through sergeant major. More than 317 heritage speakers have successfully graduated and deployed; an additional 175 personnel are currently in the training pipeline. The Army continues to expand and develop the program in response to the positive feedback from the commanders and warfighters in the field. The QDR provides $50 million over a 5-year period, from fiscal year 2007 to fiscal year 2011, to further expand this program.

Additionally, we have embedded recruitment of key language skilled individuals into our civilian recruiting efforts, thereby recruiting individuals with DOD critical sets to include languages to serve in mission critical occupations. We have developed a comprehensive outreach program with colleges, universities and professional and heritage associations; reenergized our branding and marketing materials; and revamped our "Go Defense" recruitment Web site to attract individuals to DOD as the "Employer of Choice." Our recently updated website include vignettes of current DOD employees in mission critical occupations, including language, who discuss their work and the satisfaction they realize from it as well as the benefits of working for the DOD.

Attracting and hiring individuals with high proficiency language skills from heritage communities and graduates of the DOD-sanctioned education programs presents security clearance challenges. We have partnered with the Office of the Director of National Intelligence (DNI) to develop and are implementing a number of important initiatives to help reduce these barriers. Within the DOD, we are also conducting a scrub of all civilian positions coded for language to validate clearance level requirements; establishing a pilot to expedite hiring; and, promulgating best practices from the hiring pilot.

Security clearances are particularly challenging for our 09L members. Current security requirements mandate that only U.S. citizen can obtain a security clearance and many of our 09Ls are legal resident aliens. The Army issued a "limited access authorization" allowing non-citizens in the 09L program to take a polygraph. Upon passing the polygraph, the member can then handle classified material while in theater. This accommodation enables 09L to handle classified material while in theatre awaiting citizenship or granting of security clearance.

Ensuring Surge Capability—Generating Competencies to Meet the Unexpected

As we evaluated our operations in Afghanistan and Iraq, it was obvious that we did not have sufficient language capability within the force to meet demands. The Army, as the executive agent is coordinating contract linguist support. As a result, highly proficient contract linguists have been made available to commanders in theater. This is one example of how we can generate a surge capability harvesting language resources from the talent pool within and outside our country. We are also developing appropriate processes to maintain contact with our military and civilian retirees and separatees. The goal is to build a personnel database with language and regional experience information that would allow us reachback capability for voluntary recall. While current surge capability is obviously focused on ongoing operations, we are also looking beyond for potential or emerging areas in which the total force might be called upon to operate.

Building Professionals

Post-September 11 military operations reinforce the reality that the DOD needs an improved capability in languages and dialects of strategic interest. A higher level of language skill and regional expertise, to include cultural awareness, across all the Services are necessary to build the internal relationships required for coalition/

multi-national operations, peacekeeping, and civil/military affairs. In 2005, the DOD began building a cadre of language specialists possessing high-level language proficiency (an Interagency Language Roundtable (ILR) Proficiency Level 3 in reading, listening, and speaking ability or 3/3/3) and regional expertise. We are working with the DOD components to identify the tasks and missions that will require 3/3/3 proficiency and determine the minimum number of personnel needed to provide this language capability. Managing the Professionals

The Department has spent a great deal of effort in managing its cadre of uniformed regional experts—the Foreign Area Officers. DOD Directive 1315.17, "Foreign Area Officer (FAO) Programs," updated in April 2005, established a common set of standards for FAOs. Most importantly, the new policies require the Services to establish FAO programs that "deliberately develop a corps of FAOs who shall be commissioned officers with a broad range of military skills and experiences; have knowledge of political-military affairs; have familiarity with the political, cultural, sociological, economic, and geographical factors of the countries and regions in which they are stationed; and, have professional proficiency in one or more of the dominant languages in their regions of expertise." The purpose of this approach to the FAO Program is to build an FAO Corps capable of operating in a joint environment with similar training, developmental experiences, and expertise.

All FAOs must be qualified in a principal military specialty. Studies undertaken by the DOD have confirmed that qualification in a principal military specialty must be an absolute prerequisite for FAOs to be successful, regardless of service. In fiscal year 2007, there are approximately 1,600 FAOs designated, qualified or are in training.

Sustaining and Supporting Special Forces

The U.S. Special Operations Command has recognized the need and value of language and regional expertise. They require each member to possess not only strong military skills but also regional and language skills. Special Operations Forces' policies ensure that their personnel are regionally trained and that their expertise and contributions are increased through consistent assignment in their region. Special Forces requirements are for speakers at a level one on the Interagency Level Roundtable. Level one is described as a functional, but limited language proficiency level. Special Forces members can take the Defense Language Proficiency Test 5, but prefer the Oral Proficiency Interview, since the majority of their requirements focus on the speaking modality. We are working to increase the availability of Oral Proficiency Interviews to meet U.S. Special Operations Command needs.

OUR EFFORTS ARE NOT ENOUGH

We recognized that in order to increase language capability in the Department and achieve higher levels of language proficiency among our language professionals, we had to assume a more proactive role in promoting and encouraging language education in the American population. We need to be able to identify and recruit individuals who have the language skills and regional expertise we need. In June 2004, we convened a National Language Conference to begin dialog and stimulate thinking to this end. The conference led to the development of a white paper published by the Department outlining a number of key recommendations.

In January 2006, the President announced the NSLI. The NSLI was launched to dramatically increase the number of Americans learning critical need foreign languages such as Arabic, Chinese, Russian, Hindi, and Farsi. The Secretary of Defense joined the Secretaries of State and Education, and the DNI to develop a comprehensive national plan to expand opportunities for U.S. students to develop proficiencies in critical languages from early education through college. The White House provides ongoing coordination as partner agencies work to implement this plan.

The focal point for the Department's role in the NSLI is the NSEP. NSEP represents one of the national security community's most important investments in creating a pipeline of linguistically and culturally competent professionals into our workforce. NSEP provides scholarships and fellowships to enable U.S. students to study critical languages and cultures in return for Federal national security service. NSEP has partners with universities, providing grants for the development and implementation of National Flagship Language programs, specifically designed to graduate students at an ILR level three (3/3/3) language proficiency (in reading, listening and speaking modalities) in today's critical languages. These programs provide a major source of vitally needed language expertise in the national security community. As part of the DOD contribution to the NSLI, the NSEP has expanded the National Language Flagship Program to establish new Flagship programs in Ar-

abic, Hindi, and Urdu and to expand the Russian Flagship to a Eurasian program focusing on critical Central Asian languages.

The Flagship effort serves as an example of how NSLI links Federal programs and resources across agencies to enhance the scope of the Federal Government's efforts in foreign language education. For example, the Flagship program is leading the way in developing model pipelines of K–12 students with higher levels of language proficiency into our universities. I am very proud to tell this committee that we launched the Nation's first fully articulated K–16 program — a Chinese pipeline with the University of Oregon/Portland Public Schools. While focusing on early language learning, this effort has already succeeded in enrolling ten students, as freshmen, from the Portland high schools in an experimental advanced 4-year Chinese program at the University of Oregon. We have also awarded a grant to the Chinese Flagship Program at Ohio State University to implement a statewide system of Chinese K–16 programs. Finally, we awarded a grant to Michigan State University to develop an Arabic K–16 pipeline project with the Dearborn, Michigan school district, announced in conjunction with a Department of Education Foreign Language Assistance Program grant. We hope Congress will approve the Department of Education's request for the NSLI, which will significantly expand on the K–12 model that NSEP has established.

Our second commitment to the President's NSLI is the launching of the Civilian Linguist Reserve Corps pilot program, now renamed The Language Corps. Authorized by Congress, this effort will identify Americans with skills in critical languages and develop the capacity to mobilize them during times of national need or emergency. The Language Corps represents the first organized national attempt to capitalize on our rich national diversity in language and culture. We just awarded a contract to assist us as we begin a 3-year pilot to meet our goal of 1,000 Language Corps members.

In spring 2006, the Under Secretary of Defense for Personnel and Readiness invited the Federal Chief Human Capital Officers to join the DOD in building the Language Corps. We will continue to engage the Federal community as we proceed with the 3-year pilot.

The Department's contributions to the NSLI reflect the significant amount of coordination among DOD staff, our NSLI partners, other Federal agencies, and State government and local education systems. The NSLI was built so that programs proposed by the Departments of State, Education, Defense, and National Intelligence, when funded and executed, would improve the national language capacity.

Finally, the Department is coordinating a series of regional summits to engage state and local governments, educational institutions, school boards, parents, and businesses at the local level in addressing foreign language needs. The NSEP reached out to the expertise of its three Flagship Universities—in Ohio, Oregon, and Texas to convene these summits and to develop action plans that reflect an organized and reasonable approach to building the infrastructure for language education at the State and local level. These summits will take place later this spring and action plans will be produced by the fall 2007.

CONCLUSION

Thank you for the opportunity to share our current and future language and regional expertise transformation efforts. I hope to leave you with the understanding that building foreign language capability and regional expertise within the DOD is serious business. We have taken actions to ensure that our efforts are institutionalized in our recruitment efforts, compensation rules, plans, policies, training, and doctrine. We have made great progress and the Defense leadership commitment to the development of this important competency has been unwavering. However, we have not yet reached the finish line. Your continuing support of our efforts through legislation and appropriations is appreciated. The journey has just begun, but we must do it right as our Nation, and our national security depends on successful strategy and sustained execution.

Senator REED. Thank you very much, Secretary McGinn, for your testimony.

Dr. Van Tilborg?

STATEMENT OF HON. ANDRÉ VAN TILBORG, PH.D., DEPUTY UNDER SECRETARY FOR SCIENCE AND TECHNOLOGY, DEPARTMENT OF DEFENSE

Dr. VAN TILBORG. Mr. Chairman, thank you for this opportunity to appear before you to discuss the DOD's S&T investments in the areas of language translation devices and cultural awareness training. I will use this opportunity to summarize a few of the DOD's current capabilities in language translation research, some of which I know you have had an opportunity to see here in the exhibits this afternoon. I will also briefly describe some of the planned future work on human, social, cultural, and behavioral understanding that supports our warfighters' need for interaction with unfamiliar cultures.

Mr. Chairman, I would like to begin, though, by acknowledging the strength and resolve of one of this Nation's great educational institutions, Virginia Polytechnic Institute and State University. As we speak about S&T here today, I ask that we all reflect on the students and faculty at one of America's foremost institutions of S&T who perished in a senseless rampage only a week ago, and I ask that we recognize the thousands of Hokies who through their commitment to learning and knowledge will surely honor the sacrifice of their friends and colleagues by reaching for a deeper understanding of nature, the arts, and the world in which we live.

Mr. Chairman, there are four main take-aways from my testimony, as follows: Number one, the DOD's S&T enterprise recognizes that the abilities to understand and even converse in the languages of indigenous populations and to appreciate local cultures and social mores are important in military and stability operations.

Number two, the DOD's S&T program has been at the forefront of research in language technology for many decades, enabled by providing a stable base for long-term research.

Number three, promising language translation and cultural understanding technologies have emerged from these DOD-sponsored efforts.

Number four, cultural awareness S&T is still in its infancy, but the DOD has conducted a concerted effort to develop a coordinated research and investment strategy that ranges from basic research to prototyping.

Language is a deceptively simple, yet a maddeningly intricate subject. It is known surprisingly well by toddlers, who sometimes can learn even more than one language. Yet, paradoxically, generations of brilliant researchers with the world's most powerful supercomputers have struggled to produce even rough automated translations in everyday environments. The value of knowing languages and being able to translate among them is self-evident in this globalized economy for the business person, the tourist, and the diplomat. As has been mentioned, for the U.S. military one of the great challenges is to operate unpredictably in regions of the world where we cannot converse with the local population nor read local written materials, such as newspapers, road signs, and handbills, nor understand radio, television, and Internet communications.

Not surprisingly, our commanders in the field have called for help in dealing with the diverse and unfamiliar language and cultural terrain in their areas of responsibility. Not only counter-

insurgency environments, but also humanitarian crisis relief operations have forced the military to confront a situation in which all personnel need some ability to operate effectively in settings where they must have skills to work in novel language and cultural dimensions.

Not only is it desirable to communicate in their language with the indigenous population, but also with non-English-speaking allied forces in our coalition operations.

There are approximately 7,000 spoken languages in the world. Sixty percent of the world's population speaks one of the top 30 languages as their native tongue. I can personally vouch for having a modest grasp of three of those top 30 languages, including English. About 200 languages claim at least one million native speakers each. The ability to converse and translate seamlessly between English and at least a substantial fraction of these languages could potentially add greatly to the capabilities of a combatant commander.

The microelectronics and software revolutions have brought us to the brink of compact machines that can plausibly translate among natural languages. You have seen some of the impressive results this morning in the exhibition here today.

I would also like to impress upon you how difficult the problem of automated language translation is, as the S&T guy here today. Let me read you a portion of a statement from International Business Machines (IBM), and this will surprise them here, regarding their efforts in language translation technology, which illustrates how difficult the problem is. On January 8, IBM issued a press release describing the successful results of an experiment in automatic translation of Russian to English. In that press release, a researcher is quoted as saying: "Those in charge of this experiment now consider it to be definitely established that meaning conversion through electronic language translation is feasible and that perhaps 3 years hence interlingual meaning conversion by electronic processes of several languages may be an accomplished fact"—that is, language translation.

I would say that a problem that requires 3 years for the legendary technical minds at IBM to solve is certainly a difficult one. However, when I mentioned that this press release was issued on January 8th, I neglected to tell you that that was January 8, 1954, and the electronic computer involved was the first IBM Model 701, IBM's first commercially available computer with an electronic memory. Fifty three years later, the natural language research community, including IBM, continues to make steady progress.

Fundamentally, automated language translation is extremely difficult because it cannot be achieved solely by mapping back and forth between words and dictionaries. Many decades of research sponsored by DOD's various research agencies and, I might say, the National Science Foundation have reinforced the critical idea that successful language translation depends on the concept of meaning. That is, it is not good enough to know that certain words and phrases have counterparts in other languages into which they should be translated. The translator, whether he be human or machine, must understand the meaning in the material to be translated.

Many different techniques have been discovered for extracting meaning from language, representing that meaning in a form that can be digitally stored and manipulated, and generating translated text and speech from those intermediate representations. You have seen a variety of examples here today.

A simple example illustrates the point about meaning. If I say the two-word sentence "Time flies" in English and ask that it be translated into another language, you probably must ask me, what do I mean? Do I mean that time moves swiftly forward, or do I mean that time has wings, or do you want me to use a stopwatch to measure flying insect maneuvers or for determining the hang time of a baseball hit by a batter? All those meanings are plausible when I say "Time flies." The translation depends on an understanding of meaning, which is still very hard for computers and software to do.

Nevertheless, the DOD's research investments have yielded some impressive results, some of which have entered utility assessments and operational military assessments. I would like to mention just a few of the ones that are on exhibit here today. As you have seen, the largest speech-to-speech translation research program in DOD is DARPA's Spoken Language Communication and Translation System for Tactical Use (TRANSTAC). TRANSTAC has developed PC-based translation systems that allow speech-to-speech translation between English and variants of Arabic.

The program has contributed to the development and fielding of a number of products such as you have seen here today, the Phraselator and IBM's MASTOR system. The Phraselator is a relatively simple device that enables one-way translation of speech inputs into translated phrases that have been pre-recorded and stored in the device. For example, when the user speaks an English phrase the Phraselator searches its memory for the closest matching pre-recorded phrase in the target language and speaks that phrase. Translation success is improved by grouping related phrases into pluggable modules oriented toward specific functional domains, such as for example first aid or hospital operations or security checkpoints.

There are currently over 2,000 of these devices in the field in Iraq. A similar device is called the Voice Response Translator, which is also on display here today.

Another promising system, developed jointly by DARPA and IBM, is the Multi-Lingual Automatic Speech-to-Speech Translator, called MASTOR. MASTOR combines cutting edge technologies in automatic speech recognition, understanding, and synthesis. In contrast to Phraselator, it is intended for use with bidirectional, unconstrained, free form natural speech in multiple domains.

MASTOR incorporates many extremely sophisticated algorithms and processing techniques, yet is capable of operating on laptop computers. Several dozen of these units are in experimental use in Iraq.

Other impressive DOD-sponsored systems that tackle various aspects of language understanding and translation have been developed by companies, such as SRI International, BDM Technologies, Speech Gear Incorporated, Integrated Wave Technologies, and CACI, among others. Varying quantities of experimental devices

have been fielded to units, such as the 18th Airborne Corps, 1 Marine Expeditionary Force (MEF), 1 MEF, the Army's III Corps, and the 25th I.D., for example.

The DOD's largest investment in text-to-text translation, as opposed to speech, is DARPA's Global Autonomous Language Exploitation (GALE) program. The program's goal is to translate and distill foreign language material, such as television shows and web sites and streaming video, in near-real time and highlight salient information to produce targeted query responses. The program is intended to deliver a capability to translate both structured and unstructured text and speech. Several system are currently fielded in Iraq.

Mr. Chairman, to summarize this aspect of my testimony, the DOD's S&T investment in language translation automation, I would tell you that much progress has been achieved through steady research investments, but that the goal of robust translation capability, able to handle spontaneous, unstructured, unconstrained input in a noisy background, comparable to what a human being would be able to do, has not yet been reached.

Shifting gears quickly now to the area of cultural awareness training, the need for improved cultural awareness training is broadly recognized in DOD and in an emerging sense in our DOD S&T program. The Joint Force needs some of the same cultural awareness competencies that our Special Operations Forces have traditionally maintained. Military operations in complex multicultural environments require an awareness and knowledge that can be applied to improved operator interactions and shape the outcome of the interactions. The ultimate goal is to achieve an acceptable baseline for cultural competency across our forces.

From a technology perspective, the first generation capabilities in this area are being derived from the best academic and professional subject matter experts, providing schoolhouse content. The next generation will likely be computer-mediated training and mission rehearsal in relevant venues. The third generation will be embedded within a more immersive dynamic environment.

There are several S&T efforts currently being pursued in the DOD's S&T program related to this area. There is a program called Synthetic Environment for Analysis and Simulation that is available for viewing I believe here in the exhibit hall, in the hearing room.

Senator REED. Doctor, are you near the conclusion?

Dr. VAN TILBORG. Yes, I am very close.

Senator REED. Thank you.

Dr. VAN TILBORG. Another system is DARPA's Tactical Language and Cultural Training System, which was designed to provide our warfighters with basic cultural proficiency with only limited computer laptop training. This system is currently available in Iraqi, Arabic, and Pashtun, and provides basic language and cultural awareness skills.

However, I would tell you, though, Mr. Chairman, that the S&T in this area of cultural awareness is at an earlier stage of maturity than is language technology, and in recognition of that fact the DOD conducted, working with the military components, conducted an extensive survey of the research areas related to human, social,

cultural, and behavioral understanding in 2006 and identified 75 areas of research, in which approximately a very large fraction are currently not being invested in.

To address these gaps, the DOD has formulated a human, social, cultural, and behavioral modeling initiative that we call HSCB, in which we plan to invest approximately $210 million over the Future Years Defense Program starting in fiscal year 2008 to develop the required scientific base to field mature technologies.

Mr. Chairman, in conclusion, I would like to reiterate the main points: one, the DOD S&T enterprise recognizes that the ability to understand and converse in languages of indigenous populations is important in military and stability operations. The DOD's S&T program has been at the forefront of research in that language technology, which is a very difficult problem.

Promising language translation technologies have begun to emerge from these efforts and, although cultural awareness S&T is still in its infancy, the DOD has stood up a plan for investments in S&T in this arena.

That concludes my statement. Thank you.

[The prepared statement of Dr. Van Tilborg follows:]

PREPARED STATEMENT BY DR. ANDRÉ VAN TILBORG

INTRODUCTION

Mr. Chairman, distinguished members of the subcommittee, thank you for this opportunity to appear before you to discuss the Department of Defense's (DOD) science and technology (S&T) investments in the areas of language translation devices and cultural awareness training. I will use this opportunity to describe the DOD's current capabilities in translation devices and cultural awareness training, the challenges in these areas, and some of the planned future work that supports our warfighters' needs for interaction with non-western cultures. I am also pleased to have the chance to highlight in this hearing some of the new and expanded initiatives we are hoping to undertake in these areas to address the 2006 Quadrennial Defense Review (QDR).

I have organized this testimony into two sections, one dealing with language technology devices and the other with cultural awareness training. There is obviously some linkage between these two areas, but many of the research challenges in translation devices or socio-cultural awareness training are unique to each. For these areas, there is a clear need for increased skills and capabilities for all of the Combatant Commands (COCOM), and there are specific needs statements from at least two COCOMs, Central Command (CENTCOM), and Special Operations Command (SOCOM). The language and cultural terrain of each COCOM's Areas of Responsibility (AOR) define the technical challenges. However, we do recognize that the solutions are not solely technical in nature, and the Department must also address Manpower, Personnel, and Training as part of the solution sets.

I will address language translation devices research and engineering first. The global war on terror, and, more generically, Irregular Warfare (IW)/counter-insurgency environments have forced the military to confront a situation in which all personnel need some abilities to operate effectively in settings where they must have skills to work in novel language and cultural dimensions. The requirement for a deeper understanding of the human environment in an AOR is now relevant, not just for Special Operations Units, but for all soldiers and marines who are deploying. At the strategic level, the global war on terror has created the need not only to have the ability to communicate with indigenous peoples from diverse cultures, but also to be able to understand their written and media communications. The sheer volume of written text and other media (i.e., television broadcasts, internet postings) makes using individual human translators untenable. Given the realities on the ground in the CENTCOM AOR and the scale of the global war on terror, it is evident that for our current and future forces we need to discover, develop and field technologies to augment our existing translation capabilities at the strategic, operational and tactical level, for multiple languages and dialects, and for users that span a broad language skill level (novice to linguist). Some of the capability needs

and technical challenges and the efforts to meet these challenges and field viable products to our forces are described below. The work listed below does have application to the general purpose force, to planners and operators, and to the Intelligence Community (IC). However, the IC has their own specific, unique use scenarios that require linguistic capabilities to support intelligence analysis. In this testimony I will intentionally focus on DOD specific investments. However, please recognize that we are cognizant of the development being done in the IC, have numerous links to the IC linguists, and our investments complement their work.

LANGUAGE TRANSLATION DEVICES

From a technical perspective, there are some common underlying capabilities that serve both text and speech translation. However, each has unique features that make fielding operational devices difficult. The commercial sector has developed translation capabilities and technologies that meet some of the needs of the operational forces, and the pedigree of this technology (i.e., IBM's MASTOR) includes a history of DOD funding. However, many of these available products are not robust enough to meet the scale, breadth, and tempo required for the mission areas/needs of deployed forces. The threshold for effective use of speech to speech translation in the business world is lower than in the military, there is a need for 'street' level communication that accounts for unstructured/colloquial speech, varied sub-dialects, noisy environments, the need for hand's free communication, and the need for increased accuracy in real-time, tactical translation. Text and media translation has additional challenges that include bandwidth limitations in operational environments, and degraded signals such as smudged and handwritten text translation. Lastly, the military needs access to a large volume of spoken and/or written language to create the databases, scalable models, and training materials for some of the more obscure languages and dialects that occur across the globe. There are approximately 7,000 distinct languages/dialects in the world. Many of the places we may operate have hundreds of subcultures and languages. The commercial technology investments are not focused on providing translation in these types of niche markets. DOD investments in this area are concentrated on improving existing technology to reach the translation accuracy necessary for our forces, and on expanding the reach of these tools to the socially and linguistically diverse regions in which the DOD operates. What follows is a description of the most significant technology developments in the area of language. It should be evident from the descriptions below that the ongoing and planned programs within the services and other organizations, such as the Defense Advanced Research Projects Agency (DARPA), are truly complementary.

Speech-to-Speech Translation

The major speech-to-speech translation systems have taken advantage of previous commercial successes in translation. The largest program today is DARPA's Spoken Language Communication and Translation System for Tactical Use (TRANSTAC). TRANSTAC has developed PC-based translation systems that allow speech-to-speech translation between English and Baghdadi Arabic. Its current accuracy, in controlled noise environments, is between 70–80 percent. The TRANSTAC system is being field tested in Iraq for specified use domains (i.e., medical care, vehicle checkpoint, and joint Iraqi coalition force missions). The program has had early successes and has contributed to the development and fielding of a number of products such as the Phraselator system and IBM's Mastor system. The Mastor system recently made headlines when IBM offered to donate over 10,000 software licenses and 1,000 devices to the DOD. The TRANSTAC program is attempting to develop and field hands-free two-way speech to speech translation systems that can provide accurate translation in urban military environments. A secondary goal is to expand the domains and accuracy of the existing system. Other programs, such as the Instant Language Translation project under the Office of Naval Research, are expanding the capability of portable translation systems by including multi-mode inputs (spoken, written, images) and additional languages and dialects from other regions of the world such as Korea and Somalia.

Text-to-Text and Media-to-Text

The largest DOD S&T investment in text-to-text translation is DARPA's Global Autonomous Language Exploitation (GALE) program. The program's goal is to translate and distill foreign language material (e.g. television shows and websites) in near real-time, highlight salient information, and produce targeted query responses. The program will deliver the capability to translate both structured and unstructured text and speech, with a goal of delivering an accuracy of 95 percent for text and 90 percent for speech. Other investments include improvements in tac-

tical document translation system accuracy and capabilities. It should be noted that the media-speech to text is working in a domain where the speech is controlled with rather predictable vocabulary. The GALE program has already accomplished much in the way of improved accuracy in translating text (55 to 75 percent accuracy) and media (35 to 65 percent accuracy), but they are continuing to improve the technology to a maturity level to deliver the capability to translate both text and speech at 90–95 percent accuracy.

Language Databases

The current method to support developing new language modules for existing translation devices is costly and time consuming, requiring the collection, transcription and translation of large amounts of training data (written and spoken language). The Air Force Research Laboratory has an ongoing project that will provide a rapid turnaround on developing linguistic data sources for new languages and domains of interest. The goal is to use innovative techniques to take languages and dialects in which we have limited data, with less than 10 hours of speech data or 20,000 words or less of text, and produce useful spoken or written translations.

Fielded Technology

Three of the technologies described above are in use by military units. The Phraselator, handheld one way speech to speech device, provides tactical level communication for soldiers within specific domains, such as checkpoint and medical operations. The device was originally developed as part of a DARPA Small Business Innovation Research (SBIR) effort. There are currently over 2,000 Phraselators in the field in Iraq. The DOCEX system provides the capability to process and exploit captured documents for actionable intelligence within tactical time scales. The DOCEX was developed as part of a Director of Defense Research and Engineering (DDR&E) Advanced Concept Technology Demonstration project, transitioned to the National Ground Intelligence Center and fielded. There are systems currently deployed in Iraq. Finally, the GALE program transitioned structured text/media translation technologies to 12 U.S. Government organizations, and 2 systems are currently fielded in Iraq.

CULTURAL AWARENESS TRAINING

The need for improved cultural awareness training was identified in the early phases of Operation Iraqi Freedom. It was realized that the general Joint Force needed some of the same cultural awareness competency that our Special Operations Forces have traditionally maintained. Military operations in complex, multicultural environments require more than just being culturally sensitive to the do's and don'ts of a society. Such operations also require an awareness and knowledge that can be applied to improve operator interactions and shape the outcome of the interactions. Each of the Services have established cultural awareness training centers that are developing content, sharing this content, and have begun training their personnel on the specific knowledge necessary to support their military missions. Fortunately, these centers have access to the extensive on the ground experiences of the soldiers and marines returning from Iraq, combined with the relatively well-known academic knowledge of Iraq's religious and sectarian history. Providing the same level of 'understanding' and training for data-poor, less studied socio-cultural environments, such as the mountainous tribal regions of Afghanistan or the multicultural regions of Indonesia is much more difficult.

The ultimate goal is to achieve an acceptable baseline for cultural competency across our forces. As mentioned above, the first generation capabilities in this area are being derived from the best academic and professional subject matter experts providing schoolhouse content. The next generation will likely be computer-mediated training and mission rehearsal in relevant venues. The third generation will be embedded within more immersive, dynamic environments. Methodologies to collect, package, and understand knowledge of cultural landscapes will be needed to support the generation of content that will fill these curricula and training systems. What follows is a description of the current technology developments in the area of culture awareness training for second and third generation capabilities and planned future investment in the area of socio-cultural understanding.

Ongoing Efforts

The Combating Terrorism Technology Support Office's Technical Support Working Group is developing training support packages that focus on the operational and tactical applications of cultural awareness, with a specific focus on Indonesia. The training material is being developed in coordination with SOCOM and the U.S. Army Training and Doctrine Command.

A number of SBIR and Small Business Technology Transfer Projects have begun in the area of cultural awareness. They include projects to train at the tactical and strategic level and all are focused on developing computer-based awareness training. Again, at the tactical level, an SBIR project will develop a system that will train how to read Middle Eastern non-verbal cues and develop an understanding of what those cues say about a person's intentions. Another will create more accurate and realistic non-U.S. entities that can be used in convoy commander and ground troop training simulations. At the strategic level, there are two new projects. One will support the training of planners and senior leaders in developing and assessing metrics for effects based operations in complex conflict environments. The second project will develop a computer-based tool to support leader training on interagency goals and progress in non-western conflict environments. All of these have been initiated under the new Human Social, Culture, and Behavior (HSCB) Modeling Initiative led by DDR&E.

The HSCB initiative has sprung from the lesson learned in the ongoing global war on terror. That lesson learned is that the DOD has capability gaps in software tools and decision aids that will allow U.S. commanders to better understand different cultures. The QDR highlighted these lessons in stating that current and future military operations will require enhanced capability to understand social and cultural "terrains" as well as various dimensions of human behavior. The HSCB initiative will develop the required scientific base and will field matured technologies that support human terrain understanding and forecasting across a span of missions and geographic regions. The DDR&E staff worked with the military components and intelligence community in 2006 to identify capability needs in 75 areas; there were gaps in roughly 70 of these areas. The HSCB initiative will address these gaps and integrate complex human factors into the pre-planning, planning and execution cycle of military operations. HSCB modeling is focused on filling capability gaps within data collection/infrastructure and knowledge management, and then developing the models to forecast societal and cultural behaviors. In addition to delivering software modules that are fully integrated into DOD command and control systems, the HSCB effort will help to create the infrastructure (simulations and content (data, models and theories)) to support tactical through strategic training, mission rehearsal, and experimentation using valid cultural entities and models.

Fielded Technology

DARPA's Tactical Language and Culture Training system was designed to provide our warfighters with some basic spoken language and cultural proficiency with only limited (2 weeks) laptop computer training. The system is currently available in Iraqi Arabic and Pashto and provides basic language and cultural awareness skills training for troops. There are currently 800 copies of the software installed in bases here in the U.S. as well as in theater. Over 6,000 troops have used the system for initial skills training.

In conclusion, the need for a robust DOD S&T program in language and cultural awareness and associated capabilities is a central element to fighting the global war on terror. The ongoing and future efforts of Defense S&T will support the training and equipping of today's force, tomorrow's force, and the future's force. We believe these efforts are meeting this challenge, and we truly appreciate the continued support of this committee in providing us the tools and resources to carry out this vital mission.

Senator REED. Thank you very much, Doctor. Thank you also, very much, for recognizing Virginia Tech. We all share your very important sentiment about their sacrifice, but also their extraordinary contribution to education and technology. So, thank you. That was very thoughtful.

Let me follow up with some questions to you initially, Dr. Van Tilborg. You mentioned several devices that are being used today in Iraq and Afghanistan. With respect both to translation devices and cultural awareness devices, what are the limitations that you see?

Dr. VAN TILBORG. I think some of the primary limitations are in their, what I will call, robustness, meaning their ability to be useful in contexts for which they were not explicitly developed. That is, if sentences or words or concepts are presented to these devices that the designers and developers did not program, if you will, into

these devices, then these devices can fail miserably. So that is a very difficult problem and needs to be dealt with.

Senator REED. How do you engage in feedback? Is there an ongoing process where you or your colleagues are interviewing people coming out of the field, lining up reports? Is there some formal mechanism or a combination. . .

Dr. VAN TILBORG. Yes, Mr. Chairman, there is quite a bit of feedback. There are these experimental versions of many of these products that are in theater that are being used by various units, and individuals from those units do communicate back with research managers here at our agencies.

In fact, I saw today just here in the hearing room today a young Army soldier who has used these units in theater and is actually here with us today, speaking to people about his experience with them. So there is quite a bit of interaction and feedback.

Senator REED. Are there formal mechanisms and informal mechanisms? People send an e-mail message to you and there is a requirement to evaluate these, and you look at them?

Dr. VAN TILBORG. Yes. I would say I am not well enough informed to know how formal the process is, but I know there is extensive informal communication.

Senator REED. How do you use that information to shape your research plans and your budgets going forward?

Dr. VAN TILBORG. I think that the experience of the users is critically important. So for example, issues related to form factor, the user interface of a device, how it displays its information—you can theorize as much as you would like, but the most important input is to hear from an actual user who has been out on point, as they say, from that individual, what works and what does not work.

Through our research agencies, such as DARPA and the Office of Naval Research and various other agencies that do this work, they can adjust or tailor their continued work in this area.

Senator REED. Thank you.

Let me just move right along and talk to Secretary McGinn about a couple of things. First, you mentioned the language corps and that is an intriguing idea. I wonder how much structure there is at this juncture in the language corps. Is the concept where folks are putting the names down that we can call and they might come? Or is this something where you anticipate some day being able to take people, skilled linguists, call them up, to use the term of art, and put them someplace that they might not necessarily want to go?

Mrs. MCGINN. We are looking at both of those options. One is to have a corps of people that we can actively nurture and attach to an organization that can be used and can be called for. The other is to, indeed, create a roster of people that we might call and find out if they were interested, if the need for them arose.

I must say that on this score we are really at the very beginning. It is a pilot and we just awarded the contract. We are very hopeful. We did do some marketing and found that—in fact, we changed the name from the "Civilian Linguist Reserve Corps" to "the Language Corps" because of our marketing studies. We found a great deal of interest actually among the heritage communities for helping us out with their language skills.

Senator REED. One of the things that I mentioned in my opening remarks, Madam Secretary: Everyone is working very hard, making a lot of effort, but it has been 5-plus years and we recognized the need upfront, but we are still in some cases in the initial stages. We have such a wealth of Americans with language skills from the native speaker communities. We have academics that teach these languages that are experts. We have not been able to mobilize them. It is a source, I think, of frustration probably to you also.

But as you go forward, I think we probably have to be more aggressive in this regard. I presume that at some point you might consider legislation, particularly if this is going to be something more than a voluntary corps list. Is that correct?

Mrs. MCGINN. We do not know yet because we are in the pilot stages. I would like to address your concern about how things are 5 years later, because we really did not wait after September 11.

Senator REED. No.

Mrs. MCGINN. There were a series of steps—budgetary increases, curriculum changes at DLI, and a bunch of things that we did prior to the publication of the roadmap. So we were actively moving out in many of these areas. One of them was the establishment of our own language corps, Heritage Americans recruited for their skill in Kurdish, Dari, and Pashtun, that we have now. The pilot program was very successful. There are now about 500 who are deployed or in training, getting rave reviews from commanders in the field as to their capabilities. So there is a very, very rich community to reach out to, and we very much appreciate their patriotism, because that is what we need.

Senator REED. Fine. Let us talk for a moment about DLI. The budget in fiscal year 2001 was $77 million and in 2007 it will go up to $230 million. So there has been a huge investment, I think, appropriately so. If you can just talk about the role of DLI, particularly, since there are many other universities and organizations that do essentially the same thing. There is always the question, do you have a government entity that you invest in and develop or do you go out and partner? Can you talk about your concept of the DLI mission?

Mrs. MCGINN. The unique thing about the DLI mission is that—and I do not think you find this anywhere—they take high school graduates basically and put them through intensive language training in some of the very difficult languages, and also with an eye toward the wider community, toward the skills that they need to carry forward in their career.

But DLI has evolved into this really critical mass of language expertise for us, that has created pre-deployment training, has created curriculums for difficult languages that we can pull off and teach at a moment's notice, and has created DVDs and portable things that servicemembers can take with them, language survival kits. So they have really become a critical mass of language expertise for the DOD. They have evolved into that. It is really quite an impressive operation and they have asked me to invite you to come and visit.

Senator REED. Oh, very good. They are in Monterey, California?

Mrs. MCGINN. Yes.

Senator REED. That will not influence my decision, but point acknowledged.

I understand that the intelligence analysts that go with DLI, they are tested in their writing and their reading, since verbal proficiency is not necessary, and DLI does the testing and they set the standards. The question that arises is, what is the reality check or quality check on that process? Are you aware?

Mrs. MCGINN. Yes. We actually have, they actually get tested in listening and reading.

Senator REED. Yes.

Mrs. MCGINN. We do have a Defense Language Testing Advisory Board comprised of testing experts from around the country that looks at tests, it looks at our testing process, and gets back to us.

Senator REED. Thank you.

Let me just turn to General Scales for a couple of questions. First, I would be interested, General, since you have been a practitioner and you have used graduates of DLI, what is your impression right now of DLI, its role, your general impression?

General SCALES. Generally, their knowledge is very basic. I have had a lot of experience with DLI graduates in Korea when I was assistant division commander and you can rely on them to do a lot of the decryption and interpretation. I have found there are great linear translators, in other words, but, to use André's point about the meaning and the subtleties of the language, they did not have it. So generally we had to rely on native-born Korean speakers to be able to provide us those subtleties that you need when you are trying to determine second and third order meaning.

So I guess the way to put it is DLI is basic training, and you do not take an infantryman out of 6 weeks of basic training and make him to company commander. So that would be the analogy I give you.

Senator REED. Thank you, General.

Let me follow up on your testimony, which I thought was very thought-provoking, and which is that have to move from a technocentric to a culture-centric approach, that most of the problems we have seen in the last several years have not been technical failures, but this lack of cultural awareness, the lack of linguistic ability. Can you point to the key problems in Iraq and Afghanistan to underscore your point that, perhaps, if we had a better cultural sensitivity or linguistic ability we could have found a better road out?

General SCALES. Sure. That is a great question, Senator. Let us go back to the early days, 2003 and 2004 in Mosul. In the early days the ability of young soldiers to communicate on the street with Iraqis was pretty good, simply because of the innate, I do not know, "goodness" I guess is the word I would use, of the American soldier, the ability of soldiers of goodwill to communicate with Iraqis of goodwill.

But it was flat. What should have followed, I believe, is a very intensive human-centered approach to continuing this type of dialogue, this type of interaction with the Iraqi citizens. But that did not happen in many ways, because of our penchant to find technological solutions, as I said, to problems.

I think just looking at the back of the room is illustrative of that. Here you are and we are in Iraq, trying to solve a human problem, trying to communicate, to break through cultural barriers and solve a political, military problem through human interaction and the application of social sciences, and everything behind me is a computer.

So I guess my question is, great that we apply computer sciences to solving human problems, but I suggest that the lesson from Iraq is we should have started earlier and we should have applied human sciences to solve the human problem. This is just part of our culture. We Americans view wars as science projects and we tend to find technological solutions.

I will give you another couple examples: improvised explosive device (IED) detection. One of the things that I learned early in my trips to Iraq is that there were some soldiers who could really do it. It is interesting. Some squads never got ambushed, some squads always managed to avoid IEDs. They had this sixth sense, this intuition about it.

So you ask the question, why did second squad never get ambushed and third squad did? There was something about those leaders, some human quality that they had that gave them that sixth sense. The same thing with small unit tactics. Some squads do better than others in places like Fallujah and elsewhere.

So my question is, it is great that we are spending a lot of computer money to solve different problems, but why do we not do a better job of mining the psychology, the sociology, the human intuitive, and cognitive aspects of these sorts of things to get to human solutions to human problems. My sense and my frustration, I think the reason you invited me here today, is that there is a real break within the DOD in getting what in essence is an institution that has won wars with chemistry, physics, information technology, and computers and ask them suddenly to turn around tomorrow and apply the laws of human sciences to solve this.

It would be like asking Joe Gibbs to coach hockey. A great guy, a terrific coach, and a wonderful human being, but I do not think he would know much about working on the ice.

So what I am suggesting to you, Sir, is that as you look into the future and try to solve this problem, let us take the human sciences to solve the human problems and leverage the physical sciences as appropriate. There are some wonderful opportunities there, but I would suggest that we find historians, political scientists, sociologists, psychiatrists, and psychologists and all these other human sciences and find a mechanism to bring them together to solve problems.

Senator REED. Thank you very much, General Scales.

We are joined by Senator Warner. Senator, I believe we are going to begin votes at 3 p.m., but we have some time and the floor is yours.

Senator WARNER. Thank you very much, Mr. Chairman, and I am sorry I was not here a little earlier. I really enjoy the work of this subcommittee.

But I want to pick up on the general's comments. We had our friend, General McCaffrey, up before the committee the other day. I am going to read a little something that he had to say here that

impressed me greatly. In testimony before the Armed Services Committee last week, General McCaffrey stated that military personnel should be sent to a 90-day course at the DLI in Monterey, California, or similar institution to get some fluency in the language.

I am all in favor of advancements in the sciences here and the ability of these computers, these very wonderful people who have risen to the necessity to help us through the technology. But I remember my father was in World War I. He was a doctor and in his tunic he carried with him everywhere a French dictionary. He was quite fluent in French, but he was highly dependent as a medical doctor because often he had to treat the Frenchmen.

I have some recollection in my own modest career when we went to Korea, we had to strap around and figure out some sign language because very often on patrol duty and so forth, we were out and we were literally on our own, and trying to get from the local population some information and so forth.

Where are we in the concept that we have now recognized that a certain knowledge of the language is as important as some of our military skills, and we may not always have the benefit of the technology with us. We may have just what is in the rucksack and that is about it. So I realize now, on the turn-around particularly, which my colleague and I are concerned about, rotating these people back into the area of responsibility for combat, there is not any time to send them to Monterey for 90 days. But we should be looking ahead and maybe integrating more of this into the syllabus, in hopefully a less stressful time in terms of our overseas commitments.

Anybody want to tackle that?

Mrs. MCGINN. Senator Warner, one of the things that we have done in that regard is we started with the officer corps, believing that as you lead the officer corps so you lead the DOD. We are beefing up pre-accession language training and regional culture training. The Air Force Academy and the Military Academy now require foreign language training. The Navy Academy requires it for nontechnical leaders. We are advancing into ROTC. We have the QDR gives grants to colleges and universities with ROTC programs, to develop ROTC programs. We are about to announce four of those that we have just awarded.

As a follow-on to that, all of the Services have embedded into their professional military education regional and cultural expertise, not only for their officers but also for their enlisted personnel. In many cases that also includes language sustainment.

So we have really started to move forward towards saying this is a competency that the DOD needs to have. It is a major change, and so it is not easy, but we are moving in that direction.

Senator WARNER. When we integrate our young people into the military today, we assess their skills in many ways. I am quite certain that some of these young people have some language skills that were taught in school. Is that put into their record so that we can access them in times that we need them?

I remember in my generation of school I had to take 5 years of Latin. That did not do me a lot of good, but it did help me because

it was the root language of others, and I learned what modest language skills I had, which were very modest, I might add.

Mrs. MCGINN. We are screening everyone now upon accession for their language ability. We are also screening those members who are currently in the force, since we found a lot of language capability in the force we did not know we had.

Senator WARNER. So that is in a database somewhere?

Mrs. MCGINN. Yes, sir, we have a database. We are also moving out to administer the Defense Language Aptitude Battery, which measures how well you may learn a language, so that when we need to teach people languages we can reach out to those who have a propensity for it.

Senator WARNER. Mr. Chairman, I do believe those votes are about to start. I may have one or two questions for the record, but thank you very much, and I thank the panel of witnesses. Nice to see you again, General Scales.

Senator REED. General Scales, I think you had a comment with regard to one of Senator Warner's questions?

General SCALES. Just very briefly, Senator. All these things are terrific, and I spent my last 3 years in the military superintending this. But at the end of the day officers will pay attention to and do best at those things which will achieve success, which will get them promoted.

I am sorry, that is just the way our culture is, and until we change our military culture to reward those who are good at this, who learn the language, are good at training and doing the advisory functions in Iraq and Afghanistan, until we reserve a place, until we reward them with advanced civil schooling where they can go back to a name university and learn more about the culture and be better at the language, and until the institutions, the Army, the Marine Corps, and the other Services, reserve special places and offer special rewards for these special skills, it is going to be a long, hard uphill climb.

Senator WARNER. It is interesting. When I was in the building many years ago, I noticed—and I had to do a lot of work at that time internationally in my capacity as the Navy Secretary, so I traveled a lot. I got to know the attachés, a very interesting lot, and I learned, to my chagrin, that that was the end; O–6 was it and you were out.

But at that point in time I had the authority to work the system and I finally got some stars and other things put on those people to give them recognition. Today I think it is a little better. There is a promotion chain through there to some extent; is that correct?

General SCALES. Not to my knowledge. I think the gentleman who we all look up to as our model is Karl Eikenberry, who is a Foreign Affairs Officer (FAO). Senator, he is a China FAO. His wife is Chinese and he is terrifically effective in Afghanistan. So language ability, but also the ability to really get along with people, to sublimate your ego and bond with people in a special way is as much an important talent as is the ability to speak the language.

As far as I am concerned, I look for the day when promotion to three stars, two and three stars, one of the serious considerations is not just how good a corps commander he was, but how good an

attaché was he and how good a FAO was he, and how well he ran a military advisory group.

Senator WARNER. I think we may recommend you be recalled.

Thank you, Mr. Chairman.

Senator REED. Thank you, Senator Warner.

This is an important panel. I want to take some time and ask questions, so I will ask a question or two. Senator Warner, if you would like to join me afterwards that would be helpful.

But let me go back. Madam Secretary, you talked about the Heritage Corps. One issue we have heard was the difficulty sometimes in getting security clearances for some of these individuals—particularly if they have relatives overseas. Second, that if the individual is a second generation American they may have to take a lie detector test, whereas if they are some 15th generation American from small-town USA they do not take the same test.

Can you comment on this as an impediment?

Mrs. MCGINN. I can. I am not an expert at security issues here, but I will tell you my observations, Mr. Chairman. It is difficult for them to get security clearances. We have been working with the Director of the Office of National Intelligence and with our own Under Secretary for Intelligence on some initiatives to do some changes to the adjudicators desk reference. In some cases, those who adjudicate these clearances in my opinion do not understand the cultures that people are coming from, and we have approached graduate schools to see if they would have people on call to talk to adjudicators so they can say: If this individual is from Lebanon, is this what I should expect or is this an aberration?

The lie detector tests are given to the linguists that we want to have handling classified information since many of them are not citizens and it takes a long time to process a Secret clearance. That is our way of getting them limited access authorization and getting them to work.

Senator REED. Thank you very much, Madam Secretary.

Dr. Van Tilborg, let me ask the question and then I will also ask the question of the Secretary. If more resources were available to you, where would you put these resources with respect to the language technology and cultural awareness?

Dr. VAN TILBORG. I think there is quite a bit of work that needs to be done in the development of what we call databases for both of those areas, the language technologies and the cultural awareness technologies, databases on, roughly speaking, understanding of those languages and those cultural facts and behaviors. I would put substantial resources to prototyping and experimentation. I think a lot of this work needs to be grounded in actual prototypes and trying things out, testing these devices, playing around, retrying them, and experimentation. Those would be the main areas, Senator, I would invest in.

Senator REED. Thank you very much.

Madam Secretary, a similar question.

Mrs. MCGINN. I would just like to say first of all that we were very successful in getting just about everything we wanted in the 2008 budget request. The DOD has been very supportive of funding these initiatives. I think the ways, the places that we need to go in the future, we need to do more work with the cultural and re-

gional aspects of this, understanding who has those skills, cataloguing those skills. We need to better equip ourselves to be able to respond quickly to areas of the world that have languages that we are not ready for right now in terms of having curriculums or capability, and we need to continue work on our new testing system.

Senator REED. General Scales talked in terms of incentive structures that were going to produce these leaders at every level, senior noncommissioned officers to senior officers who are culturally aware, linguistically sophisticated. One basic incentive structure is pay. I understand that there is no language proficiency pay until you reach category 3–3. Is that correct, or can you explain that?

Mrs. MCGINN. No, no, it is at level 2, the foreign language proficiency pay. The Special Forces and the United States Marine Corps are very interested in starting to do proficiency pay at level 1, Special Forces because they put that in as a requirement. The Marine Corps is hoping that if they start paying people at level 1 they will want to get to level 2. So our policies did allow for that, for the Services to do that.

Senator REED. Are you considering a broader, much more deliberate approach with proficiency pay to induce people not only to learn a language, but to progress, and for retention purposes, too? Because I suspect one of the problems you face is we have some 20-year veterans, majors, great language skills, et cetera, but they are going out to do other things. Is that being considered?

Mrs. MCGINN. Oh, absolutely. Legislative changes in the last couple of years have allowed us to increase our language proficiency pay from $300 a month to $1,000 a month. Now, not everybody gets $1,000 a month, but as you progress in proficiency and as you are learning the more difficult languages, yes, you can get that.

It is very important for the purposes you mentioned, but also for people to self-identify, because there is a reward there for them if they self-identify and they test at those levels.

Senator REED. Thank you, Madam Secretary.

General Scales, you have talked about some of the incentives you would like to see, which is recognition in evaluations and promotions, et cetera, and I think you have also made the point that this technology is very, very important, in fact, I would say essential, but it cannot be the be-all and end-all. That raises the question—we grew up in an age where we see these devices and it is rudimentary, and 2 years later this is fantastic—can you give me any kind of idea, from the scientific standpoint, Dr. Van Tilborg, when these laptop computers have been reduced to devices that you can wear on your belt? Are we talking about a system that within 20 years will get to the point where you can have two-way translation constantly in a deployable mode?

Dr. VAN TILBORG. Senator, my personal view is that, 20 years that is a safe bet that we will be able to do that, despite the fact that it has taken more than 50 years to get to where we are now. I believe that the rate of acceleration is increasing. As you can see, there is really some spectacular results that are already being demonstrated.

I think it is also very important to recognize that technology is important because there are lots of languages, and if we are going to have our forces be trained with language, it is very hard to train a language and one does not know whether we are going to be operating in area A, B, C, D, or E. Technology can be that multiplier, if you will, that allows large numbers of our forces to quickly gain adequate ability in a given language without having to go through the 6-month long or longer type of training.

So it is very critical, I believe, to do the technology. Thank you.

Senator REED. General?

General SCALES. You talked about simulators and training devices. It is important to be able, sir, to do that for language. But I also believe we need to measure behavior. David Petraeus told me a great story when he was in Mosul. He said that he had a certain number of his battalion and brigade commanders, he said, "They just would not sit down and drink tea with sheiks. There is nothing I could do to make them do that."

My suggestion to you is we not only improve our proficiency with the physical sciences, but with the human sciences. We are in a point now where we can predict behavior, we can anticipate the human reactions to different sets of external stimuli. I would argue that we do not do a good job of that right now. Perhaps as part of this simulation experiment there be some sort of immersive environment from which we could anticipate, from the grade of private through colonel, who has these particular skills.

Senator REED. Thank you, General, Madam Secretary, and Dr. Van Tilborg. It has been a very useful hearing and it has been an interesting demonstration. We might have additional questions, so we will make them available to you, not just myself but my colleagues, and we would ask you to respond promptly to the questions. Thank you all, and I think I would conclude basically that we all recognize that this technology is necessary. We hope it gets better faster. We hope it gets more all purpose and robust. It is necessary, but I think, as General Scales points out, it is not sufficient to the task. There is the human element which I think will always be with us. In fact, without that I would be out of a job.

So thank you very much. This hearing is adjourned.

[Questions for the record with answers supplied follow:]

QUESTIONS SUBMITTED BY SENATOR JACK REED

INTERAGENCY LANGUAGE STRATEGY

1. Senator REED. Mrs. McGinn, is this language roadmap tied to an interagency strategy for improving language and cultural awareness capabilities? If not, why? If so, what is that strategy and who is charged with enforcing its implementation?

Mrs. MCGINN. The Defense Language Transformation Roadmap (DLTR) is not tied to an interagency strategy, but it establishes a foundation that supports interagency collaboration. The purpose of the DLTR was to ensure foreign language capability and regional expertise development and employment.

The Under Secretary of Defense for Personnel and Readiness (USD(P&R)) is the Department of Defense (DOD) lead for language and cultural awareness. Examples of interagency initiatives by DOD include:

- In conjunction with the development of the Roadmap in June 2004, the Department began an interagency dialog by hosting the National Language Conference, in partnership with the Center for Advanced Study of Language at the University of Maryland. Attendees at this conference included representatives from other Federal agencies as well as academia, language

organizations, State and local governments, industry, and foreign countries that routinely teach their citizens more than one language.

• The USD(P&R) hosts sessions with the Chief Human Capital Officers to provide a forum for interagency discussions and coordination on language and other issues.

• The DLTR supports the National Security Language Initiative (NSLI), announced in January 2006. This initiative is an interagency partnership with the Department of State, Department of Education, and the Office of the Director of National Intelligence to develop a comprehensive national plan to expand U.S. foreign language education. As a result, we have expanded our Flagship language programs, providing grants to universities to graduate students at higher levels of proficiency. We also started working on a pilot to establish the Language Corps and initiated three K–16 programs in Chinese and Arabic.

LANGUAGE INCENTIVES

2. Senator REED. Mrs. McGinn, are you working with the Services to ensure that all Services offer proficiency incentives for personnel from the very beginning, when they reach Level 1 proficiency? If not, why? If so, when will all Services provide incentives at Level 1?

Mrs. MCGINN. We are working with the Services and have published policy that provides the flexibility and option to provide a Foreign Language Proficiency Bonus (FLPB) at Level 1 to meet mission requirements. However, we do not believe that all personnel should be provided a bonus at that level, as it represents very limited proficiency. Rather, it should be applied in a targeted manner as determined by the Service involved, in conjunction with components they support.

DEFENSE LANGUAGE INSTITUTE AND LANGUAGE TESTING

3. Senator REED. Mrs. McGinn, is Defense Language Institute (DLI) the only language training institute available to the DOD? If not, what other institutions can train DOD personnel in languages?

Mrs. MCGINN. No, the Defense Language Institute Foreign Language Center (DLIFLC) is not the only language training institute available to the DOD. However, DLIFLC is the primary training source that provides standards which meet the Interagency Language Roundtable (ILR) guidelines. DLIFLC's Washington office provides additional training to meet DOD needs.

Special Operations Command (SOCOM), United States, John F. Kennedy Special Warfare Center and School develops Special Operations Language Training instructional/training materials for classroom, Web-based, and self-paced courseware to proficiency Levels 1 and 2. The Center is transforming language training for Special Forces operators by weaving language training throughout the Special Forces Qualification Course with a graduation requirement of 1/1/1.

Additionally, the Joint Language Training Center (JLTC), Ogden, Utah, serves the language refresher and maintenance training needs of primarily Navy Reserve Cryptologic Technicians Interpretive (CTIs), with Active Duty CTIs and other Services/agencies on a space available basis. The classes are designed to provide a high-quality, intense language learning experience in a relatively short period of time. All JLTC classes are designed to fit Reserve annual training schedules, and the training needs of the current Reserve CTI population.

DOD can and does contract with other universities and organizations which provide ILR standards for language training. Through the National Security Education Program, we have partnerships with the University of Maryland, Georgetown University, University of Texas, Michigan State University, Brigham Young University, Ohio State University, University of Oregon, American Councils for International Education, University of California at Los Angeles, and the University of Hawaii at Manoa.

4. Senator REED. Mrs. McGinn, can DOD contract with universities and other organizations for language training?

Mrs. MCGINN. The DOD can and does contract with other universities and organizations, which provide ILR standards, for language training. Through the National Security Education Program we have partnerships with the University of Maryland, Georgetown University, University of Texas, Michigan State University, Brigham Young University, Ohio State University, University of Oregon, American Councils

for International Education, University of California at Los Angeles, and the University of Hawaii at Manoa.

Additionally, the DOD contracts with universities, commercial language schools, and other organizations to develop course materials, teach, develop tests, conduct research, and oversee language immersion programs, in support of its language training mission for military and civilian personnel. For example, the National Security Agency (NSA) contracts with Middlebury College to teach Slavic and Arabic languages, Washington State University for Central Asian languages, and Ohio State University for Asian languages. NSA also uses Diplomatic Language Services to provide training in African, South Asian, and Central Asian languages.

The Department purchases online commercial language training products and services for individuals who are deployed, wish to learn a language, or would like to maintain their language skills outside the traditional classroom setting. Defense organizations frequently look to universities for advanced language training in less commonly taught languages. Defense contracts with commercial language schools to provide tailored language training in specific languages or dialects, modalities, and levels for specific defense mission requirements that may be difficult to find in a traditional university, semester-bound program.

5. Senator REED. Mrs. McGinn, before and after language training is provided by the DLI to intelligence analysts and others, the trainees are tested to check their reading and writing proficiency. These tests, I understand, are written and administered by DLI instructors. Is that correct, and if so, can one say that DLI has essentially developed the test of its own effectiveness? If so, what can be done to have other individuals or groups responsible for evaluating DLI students?

Mrs. MCGINN. The DLIFLC tests students for reading, listening, and speaking. These tests are developed by a testing staff separate from the DLI. Moreover, DLIFLC is sensitive to the issue of independent testing and evaluation. This is the reason that proficiency tests at DLIFLC are designed, developed, validated, administered, and monitored by the Directorate of Evaluation and Standardization (E&S). In addition to the grade point average (GPA) as a graduation criterion, students must achieve a specified level of proficiency on a Defense Language Proficiency Test (listening and reading) and on an Oral Proficiency Interview (OPI) in order to graduate. In essence, DLIFLC has two independent testing systems, one conducted by the faculty and one conducted by E&S, which is separate from and independent of the faculty. At DLIFLC, as in all institutions of higher learning, the faculty grades students on the basis of classroom performance, homework assignments, and test performance. The student's GPA is derived from this assessment. As noted, to graduate, the student must then achieve a specified score on the proficiency tests. These proficiency tests serve as a check on the performance-based GPA.

6. Senator REED. Mrs. McGinn, does the Department currently test oral language proficiency? If so, who is responsible for this testing? If not, why, and what steps, if any, will you take to test language proficiency, and how soon?

Mrs. MCGINN. The Department has an oral proficiency testing program conducted by the Evaluations and Standardization Directorate at the DLIFLC. Through in-house resources and contractual relationships with the American Council of Teachers of Foreign Languages and the State Department's Foreign Service Institute, the Directorate offers OPIs in a total of 121 languages and dialects. DLIFLC is investigating the possibility of conducting such interviews via the internet and computer-based testing in order to increase the magnitude of its test capacity.

7. Senator REED. Mrs. McGinn, what is the role of the DLI?

Mrs. MCGINN. The DLIFLC is the Department's premier language training institution. DLIFLC provides foreign language education, training, evaluation, and sustainment at ILR standards for DOD personnel in order to meet the Department's language needs.

DLIFLC performs the critical role of providing basic, intermediate, and advanced language training to more than 7,600 military students (resident and non-resident personnel). Many of the students are crypto-linguists, interrogators, and Foreign Area Officers.

8. Senator REED. Mrs. McGinn, does DLI support the Services, as well as the SOCOM?

Mrs. MCGINN. The DLIFLC supports and responds to all identified and emerging needs of SOCOM. Evidence of this support includes the dramatic shift in the types of education and training materials provided by DLIFLC to deploying members in response to identified needs. Examples of these innovations are DLIFLC-provided

Mobile Training Teams (MTTs), Video Tele-training, Language Survival Kits, and online instructional materials. Since 2001, DLIFLC dispatched 300 MTTs to provide targeted training to more than 32,000 personnel. Deploying units received over 200,000 Language Survival Kits (mostly Iraqi, Dari, and Pashto). Field support modules outlining the geo-political situation, cultural facts, fundamental language skills, key phrases, and commands are available for 19 countries in 17 languages on the DLIFLC's Web site. There are currently 31 online language survival courses. In addition, computer-based sustainment training is available via their Global Language Online Support System. All online support is available to all servicemembers.

DLIFLC offers a variety of training programs to support SOCOM basic and advanced language training demands. DLI has a permanent liaison in the United States Army John F. Kennedy Special Warfare Center and School at Fort Bragg, NC, to coordinate curriculum and testing development, and has established permanent Language Training Detachments at Little Creek, VA, and Coronado, CA, supporting the Navy's Special Warfare Groups.

9. Senator REED. Mrs. McGinn, what are you doing to help meet SOCOM's needs?

Mrs. MCGINN. As the DOD Senior Language Authority and Chair of the Defense Language Steering Committee (DLSC), I am personally involved in providing senior level oversight of language needs throughout the Department.

At our monthly DLSC meetings, which include general/flag officers and Senior Executive Service representatives from the Services, Office of the Secretary of Defense and Joint Staff, combatant commands, and SOCOM, we discuss DOD language issues and needs.

One example of a SOCOM requirement addressed was the need for increased numbers of OPIs. We are looking at technology as a possible solution to respond to SOCOM's need to deliver large numbers of OPIs in a short time period. We anticipate that ongoing OPI automation research initiatives will offer the ability to provide the tests on demand, as well as offer student diagnostics and screening for potential language candidates. The systems we are exploring include the Versant computer-based testing with either speech recognition software or human scorers grading the tests, and OPI computerized tests.

Additionally, I have ensured that appropriate funding is provided, and as a result, the DLIFLC has increased their faculty of certified OPI testers from 288 to 398. We will continue to monitor these initiatives to ensure SOCOM's and the Services' requirements are met.

CRITICAL LANGUAGE CAPABILITIES

10. Senator REED. Mrs. McGinn, in your opening statement you noted that, at the beginning of fiscal year 2007, DOD had "141,887 Active component; 77,319 Reserve component; and 38,246 civilian members" who reported having foreign language skills. Of those reporting language skills, how many have skills in critical languages such as Arabic, Chinese, Russian, Hindi, or Farsi?

Mrs. MCGINN. Our current self-reported capability is outlined below. Please note that these are self-reports and not tested proficiency.

Language	Capabilities
Arabic	8,674
Chinese	5,530
Russian	8,118
Farsi	1,863
Hindi	933

11. Senator REED. Mrs. McGinn, what percentage of those critical language speakers has more than basic language skills—that is, they can engage confidently in complex conversations on a broad range of topics or conduct translations with a high degree of accuracy?

Mrs. MCGINN. Personnel who tested or professed to have skills at ILR skill Level 2 or above possess more than basic language skills. Those who tested or professed at ILR skill Level 3 or above are considered professionally qualified, i.e., they can engage confidently in complex linguistic transactions. Of the total 25,118 people claiming a capability in Arabic, Chinese, Russian, Farsi, and Hindi, 13,815 (55 percent) have tested and/or self-professed at Level 2 or above. Our current capability at Level 3 or higher is 4,672 (18.6 percent) of the total population that reported a capability in such critical languages.

SPENDING ON CONTRACTORS

12. Senator REED. Mrs. McGinn, what is the total number of linguists that DOD currently has under its various contracts and what is the total sum of money spent on these contracts?

Mrs. MCGINN. As Executive Agent, the Army is authorized to contract up to 10,000 linguists, and will spend less than $900 million during fiscal year 2007.

LANGUAGE AND CULTURAL SKILL RETENTION—SPECIAL OPERATIONS COMMAND

13. Senator REED. Mrs. McGinn, I understand that when Army personnel get assigned to the SOCOM most of them (aside from the Rangers) become "Special Operations Forces (SOF) for life" and for the Army Special Forces, they are focused on one region, so that any investment in language or other training by SOCOM is retained with these individuals by the command. However, Naval Special Warfare Command personnel do not necessarily focus exclusively on one region for their careers. The Marine Corps and Air Force do not have permanent Special Operations Forces personnel. What is the impact of this difference among the Services, and what would be the advantage of having Marine Corps and Air Force personnel who are "SOF for life" from the perspective of language and cultural awareness training and retention?

Mrs. MCGINN. Language expertise and cultural familiarity are enhanced by multiple assignments in units focused on a specific region. Although "SOF for Life" is not an official program or a term that directly applies to regionalization, it is true that Army and Navy forces spend a higher percentage of their careers in SOF units. Army SOF is particularly well-organized to ensure that its enlisted force gains regional expertise through repetitive assignments. The Marine Special Operations Advisory Group requires regionalization and is maturing on the Army model. Regionalization is less important to Air Force units, except for a squadron that specializes in training foreign forces. "SOF for Life," as a concept for ensuring repetitive assignments in Special Operations units, irrespective of regional orientation, is inherently desirable. The advantage is recoupment on the investment in SOF training and SOF operational experience.

HERITAGE RECRUITING—SECURITY CLEARANCE OBSTACLES AND DISCRIMINATION

14. Senator REED. Mrs. McGinn, as you mentioned, the DOD is now planning to make a concerted effort to recruit the "heritage" first- and second-generation American citizens with foreign language expertise to serve in positions requiring language proficiency. However, committee staff are informed that there will be special requirements placed on these recruits—specifically, that they will have to take polygraph examinations that non-"heritage" speakers will not have to take. Is this true? If so, what is the rationale for this requirement?

Mrs. MCGINN. There are no requirements for United States citizens who are recruited as "heritage" speakers to take a Counter Intelligence (CI) Scope Polygraph, unless they are serving in positions requiring special security clearances.

Non-United States citizens who enlist are usually not placed in military occupational specialties requiring security clearances. An exception to this policy is for non-United States citizen accessions under the 09L Interpreter/Translator program. 09L personnel may be granted limited access to classified information in order to bridge the gap between restrictive security clearance guidelines for non-United States citizens and the necessary utilization of these personnel. To do this, they are administered a CI Scope Polygraph as part of satisfying the conditions for the exception to policy (DOD 5200.2–R, Personnel Security Program), approved by the Under Secretary of Defense for Intelligence, dated June 5, 2006.

15. Senator REED. Mrs. McGinn, if these citizens joined the military like any other citizen, and served in positions that do not require language expertise, would they be subjected to polygraph examinations? If not, why this special treatment for linguists?

Mrs. MCGINN. There are no requirements for United States citizens who are recruited as "heritage" speakers to take a CI Scope Polygraph, unless they are serving in positions requiring special security clearances.

Non-United States citizens who enlist are usually not placed in military occupational specialties requiring security clearances. An exception to this policy is for non-United States citizen accessions under the 09L Interpreter/Translator program. 09L personnel may be granted limited access to classified information in order to

bridge the gap between restrictive security clearance guidelines for non-United States citizens and the necessary utilization of these personnel. To do this, they are administered a CI Scope Polygraph as part of satisfying the conditions for the exception to policy (DOD 5200.2–R, Personnel Security Program), approved by the Under Secretary of Defense for Intelligence, dated June 5, 2006.

16. Senator REED. Mrs. McGinn, what is the Department doing to address the backlog of applicants with language ability who are awaiting security clearances, including—amazingly—individuals for whom the intelligence community has provided the funding through the National Security Education Program to live in foreign countries and study foreign languages?

Mrs. MCGINN. The Department recognizes the compelling need to address the obstacles involved in gaining security clearances for applicants who have studied extensively overseas. We recognize, working in close concert with our colleagues in the Office of the Director of National Intelligence (ODNI) that too often the current system screens out or delays the successful processing of highly-qualified candidates, with considerable backgrounds in regional areas and languages, who have studied extensively overseas. This also includes highly qualified candidates who represent "heritage learner" populations in the United States. The Office of the Under Secretary of Defense for Personnel and Readiness, together with the Office of the Under Secretary for Intelligence, has teamed with ODNI to develop and implement a number of important initiatives:

- Expand the Adjudicator's Desk Reference (ADR). We are providing additions to the ADR guide with explanations about NSEP. These changes were reviewed by a working group meeting in January 2007 and retraining has started.
- Establish subject matter expertise consultation availability to adjudicators for cultural background information during the adjudication phase.
- Expand the current DOD Adjudicator Training Course to capture changes made to the ADR.
- Issue a memorandum to components and DOD agencies apprising them of these initiatives.
- Establish a code to identify NSEP individuals as a priority at the Office of Personnel Management (OPM). We will be seeking to negotiate with Central Adjudication Facilities to adjudicate these investigations on a priority basis.
- Propose additional questions for OPM investigators to ask NSEP candidates.

In addition to these specific security-related efforts, we are investigating, in close coordination with the Assistant Director, DNI/Chief Human Capital Officer, opportunities to begin processing NSEP Scholars and Fellows for security clearances earlier in the process so that the gap between degree completion and hiring can be substantially shortened. Executive Order #12968 (Access to Classified Information, Section 1.1e) defines employees eligible for security clearances to include "grantees of an agency." We believe that, given the federally mandated service requirement associated with NSEP awards, NSEP Scholars and Fellows are eligible for security clearances as "grantees of the DOD." We are working with our Office of General Counsel to seek ways in which this definition can allow us to begin the security clearance process immediately after the individual receives an award.

QUESTIONS SUBMITTED BY SENATOR DANIEL K. AKAKA

NATIONAL LANGUAGE CONFERENCE WHITE PAPER

17. Senator AKAKA. Mrs. McGinn, the White Paper issued by the DOD summarized the recommendations of the 2004 National Language Conference. According to testimony from DOD Principal Deputy Under Secretary of Defense for Personnel Readiness Michael Dominguez at a hearing before the Senate Oversight of Government Management Subcommittee in January, DOD worked with other Federal agencies to develop the White Paper to spark public consideration. What Federal agencies worked with DOD on the White Paper?

Mrs. MCGINN. The White Paper is a result of the 2004 National Language Conference, which brought together over 300 leaders and practitioners from Federal, State, and local government agencies, academic institutions, business and industry, foreign language interest groups, and foreign nations. Among the agencies participating were the Departments of Commerce, Labor, Justice, State, Education, Home-

land Security, and Health and Human Services, as well as the Central Intelligence Agency.

18. Senator AKAKA. Mrs. McGinn, DOD's White Paper was extremely effective in laying out the critical steps needed to address the Nation's shortfall in language skills. The first recommendation calls for strong and comprehensive leadership, specifically, a national language strategy to be developed and implemented by a National Language Director and for a Coordination Council to coordinate implementation of the strategy. Have the NSLI partners laid out a 5- to 10-year strategy to address the Nation's foreign language needs? If so, please provide.

Mrs. MCGINN. When the NSLI was launched by the President in January 2006, it was understood that the actions of the four partners were only the beginning of a decades-long thrust to build language capacity within our Nation. The NSLI is designed to develop foreign language capability in critical need languages for the long-term, and fundamentally change the way foreign language competence is taught and valued in the United States. In some cases, the NSLI specifically targeted goals to be achieved by the end of the decade. For example, the Department of Education's proposed Language Teacher Corps was designed to have 1,000 new foreign language teachers in our schools by the end of the decade. Increasing the number of foreign language teachers is critical to the success of the NSLI.

19. Senator AKAKA. Mrs. McGinn, is there a leadership structure in place today that mirrors that recommended by the White Paper? If so, what steps are being taken to sustain and institutionalize continued leadership in language education in future administrations?

Mrs. MCGINN. At the present time, leadership for NSLI is provided by the White House through the Domestic Policy Council (DPC), with leaders from the agencies involved. As NSLI becomes fully-funded and gains momentum, the programs should become institutionalized to continue into the future.

20. Senator AKAKA. Mrs. McGinn, I understand that DOD is working with the Departments of Labor and Commerce to coordinate regional language summits this summer. What Federal agencies have been involved in NSLI? Please describe how each of those agencies have participated in NSLI.

Mrs. MCGINN. When the NSLI was first launched, the DPC lead invited numerous Federal agencies to meetings with the four major partners: Department of State, Department of Education, the Office of the Director of National Intelligence, and the DOD. Additionally, several of those agencies joined the frequent conference calls among the major partners.

The USD(P&R) invited the Chief Human Capital Officers (CHCOs) of 12 Federal agencies to review the proposed model for the Language Corps and to begin the process of identifying their language needs. The Language Corps is one element of the NSLI. It was a productive meeting, with the CHCOs agreeing to a mutually beneficial way ahead. The Language Corps should prove to be a strong contribution of the NSLI, and will continue to have interagency involvement as we execute the pilot program.

NATIONAL SECURITY LANGUAGE INITIATIVE STAKEHOLDERS

21. Senator AKAKA. Mrs. McGinn, according to testimony received by the Senate Oversight of Government Management Subcommittee in January, there is a lack of coordination among the NSLI partners and stakeholders outside of the government. One witness said that if there is a Federal Government strategy for addressing the shortfall in foreign language skills, it isn't very well known. How are DOD and the NSLI partners working with language associations and other stakeholders to develop a strategy and coordinate activities?

Mrs. MCGINN. The DOD is delighted that the Departments of Commerce and Labor have joined us in sponsoring the Language Summits this summer. The Flagship Universities in Oregon, Ohio, and Texas are hosting the State-level summits with multiple stakeholders, including the local business and corporate sectors. The end result should be an action plan to address the demand for language skills in each State's future workforce. We hope to promulgate these action plans as best practices for other States.

22. Senator AKAKA. Mrs. McGinn, how often have the NSLI partners meet with each other since the beginning of the year?

Mrs. MCGINN. The DPC lead and the previous Department of Education coordinator conducted frequent telephone conferences this year, to keep the partners updated on status of the NSLI and to develop outreach strategies.

23. Senator AKAKA. Mrs. McGinn, how often have the NSLI partners met with stakeholder groups this year?

Mrs. MCGINN. While I can only speak for the DOD, I'm sure you will find a similar level of activity at Departments of State and Education, and at the Office of the Director of National Intelligence.

The complex efforts behind the Defense Language Transformation, the conduct of the National Security Education Program, and launchings of the three language pipelines and Language Corps keeps DOD in regular dialogue with university and college presidents; Oregon, Michigan, and Ohio K–12 school systems; language associations; heritage communities; and other Federal agencies.

An obvious gap is outreach to the business community. We will begin to rectify this gap this summer. With our Department of Labor and Commerce partners, we will sponsor three State-level language summits in Oregon, Ohio, and Texas. Invited stakeholders include local business and State corporate employers. The outcome of the summits should be an action plan that the States can implement to build the language capacity they need in their future workforce.

24. Senator AKAKA. Mrs. McGinn, who is the NSLI point of contact for foreign language stakeholder groups?

Mrs. MCGINN. The DPC took the lead for the NSLI in 2006. The current DPC point of contact is Ms. Kelly Scott.

QUESTIONS SUBMITTED BY SENATOR MEL MARTINEZ

DEFENSE LANGUAGE INSTITUTE AND THE GLOBAL WAR ON TERROR

25. Senator MARTINEZ. Mrs. McGinn, the DOD is taking several steps to expand language training, including initiatives at the Service Academies and within ROTC programs. The DLI is still the DOD's premier for teaching foreign languages to U.S. service men and women. The DLI mission is more critical now than ever. While I note the increase in funding for DLI from $77 million in fiscal year 2001 to $203 million in fiscal year 2007, its capabilities remain limited. In light of the current demand placed on language qualified personnel, is DLI the right size?

Mrs. MCGINN. The DLIFLC currently trains all student load requirements at the capacity required by the DOD. DLIFLC has proven its capability to surge and increase student throughput since 2001. As the DOD Senior Language Authority, I recognize that DLIFLC is a critical training source, and as the Chair of the DLSC, we conduct an Annual Program Review to provide oversight and ensure capacity and capability to respond to DOD requirements.

26. Senator MARTINEZ. Mrs. McGinn, what changes are being contemplated (if any) to expand the size and capacity of DLI?

Mrs. MCGINN. As the Chair of the DLSC and the DOD Senior Language Authority, I provide oversight of the DLIFLC to ensure that it has the resources, capability, and capacity to respond to current and emerging needs.

DLIFLC currently trains all student load requirements at the capacity required. The DLSC contemplates DLIFLC size and capacity issues through a comprehensive annual performance review meeting.

DLIFLC military construction is currently programmed to add three general instruction buildings and renovate two existing structures beginning in fiscal year 2008 (available for occupancy beginning in fiscal year 2011). These new facilities, along with several ongoing renovation projects and leasing actions, will add 202 classrooms (with accompanying faculty offices and other administrative spaces).

27. Senator MARTINEZ. Mrs. McGinn, is the current enrollment (approximately 4,400) at its peak?

Mrs. MCGINN. Due to the increased need for language, we expect to see continued expansion of the DLIFLC's mission in the area of language familiarization, post-basic enhancement, and basic acquisition. The DLIFLC student population for fiscal year 2007 is approximately 4,100, which represents a 65 percent increase over fiscal year 2001, approximately 3,700 of whom are resident at the Presidio of Monterey. The other 400 represent an average daily attendance in a nonresident program.

Over the next 4 years, increased projections will bring the student population to approximately 4,800 per year.

28. Senator MARTINEZ. Mrs. McGinn, should we look more to the other sources of language training you outlined to meet language training requirements?

Mrs. MCGINN. As part of my oversight role for the Defense Language Program, we are constantly evaluating whether we are meeting Service language training requirements. The Services have included other sources of training to meet their needs, such as online learning and other "just-in-time" training sources.

Language training requirements are complex. For basic language instruction designed to achieve mission capable levels of proficiency, the programs through the DLIFLC and the language programs of SOCOM are the best sources, and both meet basic training load requirements. Other language training, such as pre-deployment training, is conducted by the military departments.

In addition, we continue to seek and build basic language competence in our Officer Corps. The Services stress the importance of foreign language skill acquisition in Service Academies and in their Reserve Officer Training Corps (ROTC) programs. The military departments built recruiting plans that include recruiting students with foreign language skills and heritage backgrounds into their ROTC programs. They implemented various incentive programs to encourage ROTC cadets and midshipmen to study foreign languages in order to increase the number of ROTC cadets and midshipmen graduating with at least two semesters of foreign language studies prior to commissioning.

The three Service academies have enhanced their foreign language study programs to develop pre-accession language and cultural knowledge. They have expanded study abroad, summer immersion, and foreign academy exchange opportunities, and added instructor staff for strategic languages. The United States Military Academy and the United States Air Force Academy now require all cadets to complete two semesters of language study. The United States Naval Academy requires its nontechnical degree-seeking midshipmen to take four semesters of language study.

29. Senator MARTINEZ. Mrs. McGinn, in your testimony you outline several courses of action/options available to react to an unexpected surge in the requirement for a set of languages (based on an emerging contingency), including calling on personnel within the ranks and accessing contract linguists. Does DLI also have the capacity to shift gears and place emphasis on new language capability requirements?

Mrs. MCGINN. The DLIFLC has the capacity to respond to unexpected surge requirements and shift gears to meet new language requirements. DLIFLC is establishing an emerging language plan to meet unexpected surge requirements. This plan includes four phases:

(1) Developing tests to measure current capabilities;

(2) Providing distance learning through web-delivered materials for maintaining and enhancing skills;

(3) Offering resident short courses for sustaining and increasing the existing proficiency of members; and

(4) Creating on-the-shelf, initial skills, resident training programs for students with no previous exposure to the needed language.

These four phases will be used in combination or individually to meet rising and emerging low density language requirements.

30. Senator MARTINEZ. Mrs. McGinn, you also note that prioritizing specific language/regional skills carry some risk that we will not project the right area for where the next contingency develops. Is there a linkage between our Quadrennial Defense Review (QDR) assessment of threats and risk and the priorities we place on selected regions and languages?

Mrs. MCGINN. There is a strong link between the QDR assessment of threats and risks and the language capabilities the Defense Language Program develops. One of the principal tools for this is the Strategic Language List (SLL). The SLL identifies the languages for which the DOD requires substantial in-house capability to support current and future plans, programs, and operations, as well as those languages for which the Department requires on-call capability in-house for crisis and emergency response. The SLL assists the Department in its assessment of the threats and determination of the risks we are willing to accept.

31. Senator MARTINEZ. Mrs. McGinn, how do we integrate the potential regional/language requirements of emerging threats into our language training plans?

Mrs. MCGINN. The Department is approaching this challenge with a four-phased plan:

(1) Developing tests to measure our capabilities;

(2) Providing distance learning through web-delivered materials for maintaining and enhancing these skills;

(3) Offering resident short courses for sustaining and increasing the existing proficiency of members; and

(4) Creating on-the-shelf initial skills resident training programs for students with no previous exposure to the needed language.

These four phases will be used in combination or individually to meet rising and emerging low density language requirements at the DLIFLC.

The Department relies on policy guidance and threat assessments to determine which languages become part of the four-phased plan. These inputs help generate the Department's SLL, which identifies the languages for which the DOD requires substantial in-house capability to support current and future plans, programs, and operations, as well as those languages for which the DOD requires on-call capability in-house for crisis and emergency response.

REWARDING OFFICERS FOR LANGUAGE AND CULTURAL CAPABILITIES

32. Senator MARTINEZ. Mrs. McGinn, in your testimony, you and retired Major General Scales both make the point that today's operations require new skills, and our military leaders must be comfortable working with coalition partners in foreign environments. General Scales recommended that military departments find ways to reward mid- to senior-grade officers for excellent performance in advisory, intelligence, and attaché-type duties. In your testimony, you outline efforts to strengthen military department foreign area office (FAO) programs. Without de-emphasizing vital combat skills, it seems like there is still more room to provide incentives to encourage officers to seek out and excel in those positions. Besides the increase on foreign language proficiency pay, what else does the DOD do to encourage excellent performance as a foreign advisor or an attaché?

Mrs. MCGINN. DOD members are driven to provide excellent performance in all jobs, whether serving as a foreign advisor or attaché. Additionally, since attachés and advisors are specially selected for these positions, they are provided targeted training before assuming these duties. For example before becoming an attaché, the selectee must attend specialized and focused training specific to the attaché, at the Joint Military Attaché School, as well as additional language training as necessary.

There are many incentives available to FAOs, which make the program desirable initially, and assists in retaining FAOs once in the program. The initial training provided to all FAOs is cited as a major incentive to attract the highest quality candidates. A fully-funded Graduate degree, learning a language at the DLIFLC, and in-country immersion training are the premier incentives for FAOs to join the program. The recent improvements in career and promotion opportunities also encourage potential FAOs to select this career field.

Additionally, FAOs are entitled to receive a FLPB and can qualify for up to $1,000 per month based on the number of languages spoken and proficiency levels.

The Office of the Secretary of Defense will continue to review the Service FAO programs, and related efforts, to ensure we are providing the right incentives.

33. Senator MARTINEZ. Mrs. McGinn, has the Department considered incentives, like adding general/flag officer FAO positions in selected foreign service functions to provide room to advance beyond the rank of colonel (e.g., defense attachés, military advisors or selected senior staff positions within Pentagon and regional combatant commanders' staffs)?

Mrs. MCGINN. DOD Directive 1315.17 directs the Secretaries of the Military Departments to design "FAO programs to provide opportunity for promotion into the general/flag officer ranks." To that end, the Department is in the process of identifying specific Service and Joint General and Flag Officer billets that would be logical career progressions for FAOs. The candidate positions include those Defense Attaché and Office of Defense Cooperation positions coded for a general/flag officer (e.g., Russia, China, and the United Kingdom), as well as positions in the Services, combatant commands, and the Joint Staff that require considerable political-military acumen (e.g., in the intelligence and strategic plans and policy areas). The goal is to identify billets that would benefit from a general officer FAO serving in that position and have the assignments rotate among the Services to allow equal oppor-

tunity and the time needed to identify, train, and promote an FAO to the rank of general/flag officer.

34. Senator MARTINEZ. Mrs. McGinn, how do we approach the requirement to develop language and cultural awareness training within the Reserve components?

Mrs. MCGINN. Members of the Reserve components have language and cultural training programs available that include, but are not limited to, classroom instruction, individual and group tutoring, online language courses, and immersion programs—both continental United States and outside the continental United States. Additionally, Reserve component members can enroll in the DLIFLC resident intermediate and advanced language courses, continuing education courses, and DLIFLC online services. The Reserve components continue to research new means for administering language and culture training that is conducive to their unique situation. Language and cultural awareness training within the Reserve components mirrors the training that is accomplished in the Active components vis-á-vis pre-deployment training.

In addition, the National Defense Authorization Act for Fiscal Year 2006 allowed the Department to align foreign language proficiency payment for Reserve and Active components by increasing the Reserve proficiency pay ceiling up to $12,000 per year. By providing members a foreign language proficiency incentive, we expect an increase in Reserve component members acquiring and/or improving their foreign language proficiency.

35. Senator MARTINEZ. Mrs. McGinn, their unique training conditions make finding time more difficult. Do members of the National Guard and Reserves also have access to language and cultural training and are they also rewarded/compensated like the Active component?

Mrs. MCGINN. Yes, the Reserve components have access to the DLIFLC resident intermediate, advanced, continuing education courses, and online services. In regard to Reserve compensation for language, we are currently finalizing the DOD FLPB policy. This policy will align FLPB payments for Reserve and Active components. As a result, Reserve pay will increase from $6,000 annually to a possible $12,000 annually, consistent with Section 639 of Public Law 108–163, the National Defense Authorization Act for Fiscal Year 2006.

DEFENSE LANGUAGE STEERING COMMITTEE AND THE WAY FORWARD

36. Senator MARTINEZ. Mrs. McGinn, the President's NSLI launched this year is designed to dramatically increase the number of Americans learning critical foreign languages. I also note the DOD's effort to take a comprehensive, deliberate look at what we need in this increasingly important area, with the naming of the DLSC. It is important that this effort to raise the priority of language and regional expertise within our Nation and the DOD be sustained. While I understand that that DLSC's assessment is not yet complete, what are the preliminary findings?

Mrs. MCGINN. The DLSC advises on DOD language issues. In this regard, preliminary results of the self-assessment of foreign languages within the Department indicate that there may be significant capability not apparent in DOD management systems. The findings revealed that, as of the current fiscal year, the Department had 141,887 Active component; 77,319 Reserve component; and 38,246 civilian members of the Total Force who reported having foreign language skills. We are committed to ensure that policies mandate the screening of individuals as part of the military accession and civilian hiring process. It must be underscored that these are reported, not tested proficiencies at this time.

While conducting this self assessment, we have initiated a broad look at language requirements across the Department. Going forward, these two initiatives should provide a basis for understanding the Department's needs.

37. Senator MARTINEZ. Mrs. McGinn, when will the results of their work be released?

Mrs. MCGINN. The DOD's comprehensive and deliberate approach to increase language expertise is outlined in the DLTR, which is slated to run through fiscal year 2008. The role of the DLSC is as an advisory body that oversees progress on the DLTR and the Defense Language Program. In this regard, the work of the committee is ongoing. The DLSC will not assess NSLI progress, but will be kept informed of DOD's role in support of NSLI.

38. Senator MARTINEZ. Mrs. McGinn, what are the expectations of the initiative to develop a Civilian Linguist Reserve Corps ("Language Corps")?

Mrs. MCGINN. The effort to establish a Language Corps responds to the reality that the Federal Government can never possess the organic capability to address immediate and emergency surge requirements across all possible languages. The Corps is a highly innovative concept that is designed to take advantage of the extensive and diverse array of languages available in the American population. The organization will identify, warehouse, and make these skills available when needed.

The 3-year pilot effort will enable the Department to build and test prototype models to determine how a permanent Language Corps should be established and function. The goal of the pilot is to recruit a minimum of 1,000 members across a number of languages and professions. As part of the pilot effort, we will conduct three activation exercises in coordination with Federal partners, not only from within the DOD, but the Office of the Director of National Intelligence, and a domestic partner such as Federal Emergency Management Agency or the Centers for Disease Control.

We are confident that, if successful, the Language Corps can emerge as a major component of a long-term solution to national needs for language competent professionals.

39. Senator MARTINEZ. Mrs. McGinn, do you envision eventually having the capability to "call up" these linguists from across the Nation as we might do with a reservist?

Mrs. MCGINN. The Language Corps will be composed of two pools of members somewhat akin to the military model of Standby and Ready Reserves. There will be a "National Pool" of members who volunteer to serve and may be available during times of need. There will also be a "Dedicated Sponsor Pool" composed of individuals who agree to perform duties in a defined position with a sponsoring Federal organization/agency. This Dedicated Pool will be smaller in size than the National Pool. The members of the Dedicated Pool will be committed to serve if called upon, while members of the National Pool will be identified on an "as available" basis. We are in the process of developing the pilot, so exact procedures are not known at this time.

[Whereupon, at 3:18 p.m., the subcommittee adjourned.]

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