

**HEARING TO RECEIVE TESTIMONY ON NON-  
PROLIFERATION PROGRAMS AT THE DE-  
PARTMENTS OF DEFENSE AND ENERGY IN  
REVIEW OF THE DEFENSE AUTHORIZATION  
REQUEST FOR FISCAL YEAR 2011 AND THE  
FUTURE YEARS DEFENSE PROGRAM**

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**WEDNESDAY, APRIL 21, 2010**

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

The subcommittee met, pursuant to notice, at 10:12 a.m. in room SR-222, Russell Senate Office Building, Senator Bill Nelson (chairman of the subcommittee) presiding.

Committee members present: Senators Bill Nelson and LeMieux.

Majority staff members present: Madelyn R. Creedon, counsel; and Roy F. Phillips, professional staff member.

Minority staff member present: Dana W. White, professional staff member.

Staff assistants present: Paul J. Hubbard and Jennifer R. Knowles.

Committee members' assistants present: Great Lundeberg, assistant to Senator Bill Nelson; and Brian Walsh, assistant to Senator LeMieux.

**OPENING STATEMENT OF SENATOR BILL NELSON, CHAIRMAN**

Senator BILL NELSON. Good morning. I want to welcome our witnesses.

The Subcommittee on Emerging Threats and Capabilities is meeting today to hear from the Department of Defense and the Department of Energy's National Nuclear Security Administration and their respective efforts to prevent the proliferation of nuclear weapons and materials.

We have with us this morning Dr. Michael Nacht, the assistant Secretary of Defense for Global Security Affairs, and Mr. Ken Baker, the acting Deputy Administrator for Nuclear Nonproliferation.

Also, we have a group of Russian University Students who are in the U.S. to further their nonproliferation studies. They were, unfortunately, able to spend some additional time in the United States—

[Laughter.]

Senator BILL NELSON.—and therefore, attend our hearing this morning, thanks to the ash from the Icelandic volcano. And so, I want to welcome you all, also, and hope this experience in American democracy is valuable to you.

The President has embarked on a three-pronged effort to reduce the spread of nuclear weapons, nuclear materials, and nuclear technology. As he has said, in the Nuclear Posture Review, quote, “The threat of global nuclear war has become remote, but the risk of nuclear attack has increased. The most immediate and extreme threat today is nuclear terrorism,” end of quote.

And so, today we will discuss the efforts, at the Department of Defense and Department of Energy, to thwart these goals of these particular nuclear terrorists. Obtaining a global commitment to stop these potential terrorists is critical. The U.S. needs to have the global community, all of us, working together.

Last week’s Nuclear Security Summit, of which I had the privilege of attending part, with the participation of 47 key countries, was a good start. Now, that commitment needs to be sustained. Several countries, such as Canada, the U.K., Russia, have been in the effort from the beginning. Others have come on board since. But, the effort has to be global in order to be successful. And we look forward to hearing more about the summit from our witnesses.

To implement the renewed focus on securing materials and preventing proliferation, each of the two Departments has requested additional funds in fiscal year 2011. We fully support the non-proliferation efforts, and we also want to make sure that the additional funds are executable. So, we look forward to a good conversation this morning.

Let me turn to our ranking member, Senator LeMieux.

#### **STATEMENT OF SENATOR GEORGE LEMIEUX**

Senator LEMIEUX. Thank you, Mr. Chairman.

Thank the witnesses for being with us today and providing their valuable testimony.

I want to thank you, Mr. Chairman, for calling this hearing. It’s a critical time for our country as the world grapples with how to manage nuclear ambitions of rogue states and state sponsors of terror; most notably, Tehran. The proliferation of nuclear, biological, chemical, or radioactive material to rogue nations or terrorists organizations is perhaps the greatest single threat to global security. So, with these challenges in mind, I look forward to hearing from the witnesses and how we’re going to confront these issues, these 21st century threats, through nonproliferation.

While the U.S. and Russia and its former republics retain most of the world’s nuclear technology, expertise, and material, the cold war is over and nonproliferation regimes, practices and mores of the past 50 years will not thwart the threats of the next 50. The time of mutual assured destruction is over. Whether we admit it or not, the world has accepted a nuclear North Korea, and I fear we are prepared to accept a nuclear Iran. We are hearing today in the news of Iranian shock troops being positioned now in Venezuela, something that we have talked about in this committee as an emerging threat to this country, as well.

We cannot talk about the future of nonproliferation without discussing our U.S. policy towards Iran, which is focused primarily on preventing Tehran from acquiring a nuclear weapon.

Again, Mr. Chairman, I look forward to the testimony of our witnesses. I welcome our guests today, and submit the rest of my statement for the record.

[The prepared statement of Senator LeMieux follows:]

[SUBCOMMITTEE INSERT]

Senator BILL NELSON. Okay. We're going to start with Secretary Nacht, assistant Secretary for Global Strategic Affairs, and then we'll go to you, Mr. Baker.

What I would like you all to do—your written statements are put in the record—what I'd like you to do is to take 5 or 7 minutes and share with us your ideas, and then we'll go to you, Mr. Baker, the same thing, and then we'll get into some detailed questions.

Mr. Secretary?

**STATEMENT OF HON. MICHAEL L. NACHT, ASSISTANT SECRETARY FOR GLOBAL STRATEGIC AFFAIRS, OFFICE OF THE UNDER SECRETARY OF DEFENSE FOR POLICY**

Dr. NACHT. Thank you, Chairman Nelson, Ranking Member LeMieux, and members of the subcommittee. It's my pleasure to appear before you today to discuss the Department of Defense's nonproliferation and threat reduction efforts, including the Proliferation Security Initiative, PSI, and the Cooperative Threat Reduction Program, CTR.

The Department is working hard to build upon our legacy of nonproliferation and threat-reduction successes, and to expand and adjust our programs to meet today's proliferation and emerging threats.

A word about the changing strategic environment in DOD's strategy. Today, the threat environment posed by proliferation of weapons of mass destruction is complex and unpredictable. President Obama recognizes the challenges of today's WMD threats, and he's pursuing a bold agenda to reduce proliferation dangers and to achieve the peace and security that comes from a world free of nuclear weapons.

The recent diplomatic initiatives and policy reviews have increased broad awareness and expectations for the United States, the Department of Defense, and our international partners to work collaboratively to reduce and counter WMD threats.

We have a threefold approach in the Department of Defense. First, we aim to support and rejuvenate multilateral nonproliferation initiatives and treaties. Second, we seek to reduce and eliminate WMD dangers at their source and in transit. And third, we seek to enhance our ability to detect and respond to emerging threats. Let me address each of these elements in turn.

On strengthening the nonproliferation regime, we are accelerating efforts to work with our allies and partners to rejuvenate and reinforce this regime, starting with a renewed commitment to the international legal frameworks that serve as the foundation for our efforts. We're actively working to strengthen the Non-Proliferation Treaty, the NPT, which is the cornerstone of the nuclear nonproliferation regime. At the upcoming NPT Review Conference,

starting next month, we will seek an outcome that reaffirms parties' commitment to the treaty and shores up its three pillars: non-proliferation, disarmament, and peaceful uses of nuclear energy.

In addition, President Obama has committed his administration to pursue the ratification of a Comprehensive Test Ban Treaty, because it restricts additional countries from developing, acquiring, and deploying nuclear weapons, and it hinders the ability of nuclear powers to develop new types of nuclear warheads. We will also seek a Fissile Material Cutoff Treaty that would ban the production of fissile material for use in nuclear weapons.

DOD fully supports these efforts; and, in particular, the fiscal year 2011 budget request from our Department recognizes the non-proliferation value of these international agreements. It aims to fund technological improvements in instrumentation and software used for detection of treaty violations, such as air sample monitoring, analysis of seismic events, and improvements in infrasound detection. These measures will ensure compliance with the NPT, the CTBT, and the FMCT, the Fissile Material Cutoff Treaty.

The administration also recognizes the importance of a variety of multilateral activities and mechanisms that help to prevent proliferation, such as the Proliferation Security Initiative. PSI builds political support for counterproliferation, and it increases cooperation through multilateral endorsement—multinational endorsement of the PSI Statement of Principles and participation in PSI exercises, 30 of which have been conducted since 2003.

The U.S. Government has taken on an important new role this year by serving as the PSI focal point, providing support, improving information flow, and coordinating schedules of international activities among partners, consistent with the President's desire to turn the PSI into a durable international institution.

The second element, on reducing and eliminating the threats, the Department's approach involves engaging in active international partnerships to reduce and eliminate WMD dangers, both at their source and in transit. The unprecedented gathering of 47 States to address these issues during the Nuclear Security Summit, just last week, represents a critical step in the President's commitment to secure vulnerable nuclear materials worldwide by the end of 2013.

Over the years, Congress has expanded CTR's authorities and created new opportunities for the program to embark on these important national and international security priorities. This legislation enables the CTR program to address emerging WMD threats and to achieve longstanding WMD nonproliferation goals more effectively and comprehensively. Accordingly, new funding mechanisms provide the Department with additional resources to think and act beyond traditional projects and activities. As we move forward, four broad principles will guide our evolution and expansion: integration, responsiveness, stewardship, and cooperation.

This year, we are taking real steps to exercise new legislative authorities that would expand the CTR program, across the globe, to reduce and eliminate emerging threats while simultaneously continuing our important work in Russia and states of the former Soviet Union.

In accordance with our authorities and with full coordination with our interagency partners, in consultation with the Congress,

we are seeking a determination from the Secretaries of Defense and State to conduct CTR projects and activities with new partner countries outside the former Soviet Union to meet the President's broader nuclear nonproliferation agenda.

The CTR program is DOD's mechanism to support the President's initiative, and the requested increase of \$74.5 million will support expanded security cooperation with Russia and additional efforts with new partner countries.

Working with partner countries in DOE and other interagency partners, and consistent with our Centers of Cooperation Engagement model, we plan to support a Nuclear Security Center of Excellence in China and a Nuclear Energy Center with a nuclear security component in India, as was announced at last week's Nuclear Security Summit. By using the centers, countries, and agencies involved—by using the centers, countries and agencies involved will be able to provide lessons learned and an exchange of best practices without requiring access to actual material or weapon sites.

The Department is similarly expanding our biological threat reduction programs, and we are requesting \$56.9 million in budget increase to meet our new global health security requirements in support of the President's national strategy for countering biological threats and the 2010 Quadrennial Defense Review recommendations from the Department of Defense.

In addition to these expansion efforts, the BTRP continues to partner with former Soviet Union countries to enhanced biosafety and security and consolidate especially dangerous pathogens, EDPs.

Additionally, CTR's chemical programs continue to assist Russia with safe, secure, and environmentally sound destruction of a portion of its chemical weapons nerve- agent stockpile that is most vulnerable to theft or diversion.

The third element of the Department's approach, detecting and responding to emerging threats, involves improving our ability to respond to these dangers. For instance, instability resulting from the collapse of a nuclear-armed state would risk the global proliferation of nuclear material, weapons, or technology, posing a threat to our homeland and the homelands of our allies. We must be prepared to detect threats and defend ourselves against WMD dangers. This includes enhancements to interdiction and elimination capabilities, as well as preparations to respond quickly to an attack, should our preventive and deterrent efforts fail.

Senator BILL NELSON. Dr. Nacht, I need you to wrap up.

Dr. NACHT. I am just about done, Senator.

Our Quadrennial Defense Review identifies preventing proliferation and countering weapons of mass destruction as one of the top priority missions of our Department, and we'll be working closely with SOCOM's ability to counter WMD operations in establishing a Joint Task Force Elimination Headquarters to plan, train, and execute WMD elimination operations.

Other aspects of my testimony are included in my written statement in the record.

Thank you very much.

[The prepared statement of Dr. Nacht follows:]

Senator BILL NELSON. Mr. Baker?

**STATEMENT OF KENNETH E. BAKER, ACTING DEPUTY ADMINISTRATOR FOR DEFENSE NUCLEAR NONPROLIFERATION NATIONAL NUCLEAR SECURITY ADMINISTRATION**

Mr. BAKER. Mr. Chairman, I want to apologize up front; I caught a cold in—vacationing in Florida, but I assure you, sir, that it did not come from Florida—the great State of Florida. So, I apologize for the cold.

Senator LEMIEUX. Mr. Chairman, I already corrected it; he caught it at the airport before he came to Florida. We know that—

Mr. BAKER. Yes, sir—

Senator LEMIEUX.—he could not have gotten—

Mr. BAKER.—it was in the airport.—

Senator LEMIEUX.—have gotten a cold—

Mr. BAKER.—or, in Virginia, but it was not in Florida. But, I enjoyed my vacation, even with the cold, in Florida.

Senator BILL NELSON. Mr. Baker, it's an oxymoron, "cold/Florida."

Senator LEMIEUX. Right.

Mr. BAKER. Yes, sir.

Thank you, Mr. Chairman. I'm Ken Baker, Principal assistant Deputy Administrator of the NNSA's Office of Defense Nuclear Nonproliferation.

It's always a great pleasure to come before this committee to tell you about the NNSA's nuclear nonproliferation program. I'm prepared to make a formal written statement, Mr. Chairman. And, with your permission, I will submit that for the record. And I do have about 3 or 4 minutes of oral testimony.

Senator BILL NELSON. That was already entered, 12 minutes ago.

Mr. BAKER. Thank you, sir. [Laughter.]

The President is requesting 2.7 billion for the—this nonproliferation program, an increase of 26 percent over the last year's funding levels. We are trying to prevent nuclear weapons from falling in the hands of terrorists, to stem the further proliferation of nuclear weapons and materials, technology expertise to build them.

I'm not one to hype the threat. It's not easy to build a nuclear weapon. But, the consequences of any nuclear attack or nuclear incident would be so dire that it would greatly affect all of our American citizens. We must do everything we can, as quickly as possible, to ensure that this does not happen.

The President has challenged the United States and international community to accelerate your—our materials security efforts over the next 4 years. The fiscal year 2011 budget request reflects the initial investment from this challenge. Our fundamental priority is the security of nuclear materials, because if terrorists are unable to acquire nuclear materials, a weapon cannot be fashioned. In fact, the largest portion of our budget is aimed at making sure that vulnerable nuclear material is protected, removed, and disposed of. These first-line-of-defense programs are the heart of the President's 4-year effort and drive the increases requested for the global threat reduction and material protection, control, and accounting programs.

For example, the budget increase requested to allow the Global Threat Reduction Program to remove an additional 530 kilograms of excess highly enriched uranium from countries such as South Africa, Mexico, Serbia, Ukraine, and Belarus, as well as to convert seven additional reactors from highly enriched uranium to low-enriched uranium.

The Fissile Materials Disposition Program, FMD, is also essential our—on our efforts toward nuclear disarmament and a world free of nuclear danger. This program works to dispose of surplus U.S. highly enriched uranium and U.S. and Russia weapon-grade plutonium. Of the funds requested for the FMD program, 87 percent is for efforts to dispose of surplus U.S. weapons-grade plutonium. The largest part of this involves the construction of a mixed-oxide fuel fabrication facility in Aiken, South Carolina, which has been underway for over 2 years, and it is on schedule and within budget. FMD has also made progress in the disposition of Russia surplus weapons-grade plutonium. And just last week, at the Nuclear Security Summit, Secretaries Clinton and Russian Minister of Foreign Affairs Lavrov signed a protocol amending the Plutonium Management Disposition Agreement. This agreement commits both countries to dispose of no less than 34 metric tons of surplus weapons-grade plutonium, which, combined, represents enough material for approximately 17,000 nuclear weapons.

Our security work in Russia has been going on for many years, and the results are tangible. Thousands of nuclear warheads and hundreds of tons of weapons-grade plutonium are better secured today, due to our efforts. But, we have additional work to do. The job is not complete. We have identified some new areas that need to be addressed before we can conclude our efforts in Russia.

We're concerned about two things. First, the sustainability. It would do us little good to have spent years working to improve security in Russia if we fail to help our parties create a sustainability program in nuclear security. The second thing we must do is to look beyond Russia to create multiple sustainability levels of defense, such as providing radiation detection monitors and related response training over the world, and securing seaports away from our borders through our second-line defense program. No security program is perfect, and any system can break down due to human error, equipment malfunction, or overwhelming attack. Multiple layers of defense help mitigate these issues.

Our elimination of weapons-grade plutonium in the three reactors that were remaining in Russia, I can say today, sir, is complete. Two reactors that make weapons-grade plutonium were shut down 1 year ago, and the last one was shut down last week. So, we have completed this program of shutting down all weapons-grade plutonium reactors in Russia.

This budget request will allow us to continue to provide vital support to the International Atomic Energy Agency and the Nuclear Suppliers Group. We want to continue to revitalize the U.S. nuclear safeguards technology and human base, which has suffered attrition over the years, through our next-generation safeguards initiative.

Last, we want to continue using the investment in world-class capabilities of the Department of Energy's nuclear weapons labs to

conduct research and development of new technology capabilities to support the Nation's arms control and nonproliferation efforts.

In summary, Mr. Chairman, I thank this committee for your continued support and longstanding and newly ambitious efforts. We are equipped to play a critical role in preventing terrorists, rogue states, and proliferators from acquiring a nuclear component.

Again, I appreciate this opportunity, and I will—I'm ready to take your questions, sir.

[The prepared statement of Mr. Baker follows:]

Senator BILL NELSON. Thank you, gentlemen.

We'll turn to Senator LeMieux first.

Senator LEMIEUX. Thank you for your testimony. I want to stay, as a prefatory remarks, that I'm supportive of your efforts, and the administration's efforts, to reduce the amount of weapons-grade nuclear material in the world, to lock that—those materials down so that they don't get in the hands of rogue states. I also support his efforts—I know that he has come forward on trying to get rid of tactical nuclear weapons, because of the dangers that they could get into the hands of rogue states.

But, I want to focus specifically on a rogue state that we know, or at least we believe, is trying to arm itself with a nuclear weapon; and that's Iran. We've heard testimony, in front of the full committee, that Iran may be able to produce a nuclear weapon in a very short time period, certainly less than 5 years, maybe from 1 to 3 years. We heard testimony, yesterday, that Iran may be able to develop an intercontinental ballistic missile within 5 years.

So, I want to focus, if we can, to start off with, on Iran, on Tehran's efforts. We have, of course, the knowledge that we gained, months ago, on the new facility that they have in Qum. It seems, despite the administration's overtures to have a diplomatic solution to this, that Tehran has snubbed its nose at us and is proceeding on the path of developing a nuclear weapon.

How concerned are you about Iran's acquisition of enough weapons-grade fissile material to make a nuclear weapon?

Secretary?

Dr. NACHT. Well, it is a serious concern of the Department and the administration. It's a top priority of this administration, to prevent Iran from developing or acquiring a nuclear weapon. Very recently, Under Secretary Flournoy and Vice Chairman of the Joint Chiefs, General Cartwright, testified, just last week, in fact, in front of the full Senate Armed Services Committee, and cited the two central objectives of our policy, working to prevent Iran from acquiring these weapons and countering Iran's destabilizing activities and support for extremists in the Middle East.

Our primary focus continues to be enhancing regional security cooperation with Middle Eastern partners. We're working actively to counter destabilizing Iranian activities by strengthening the capacities of vulnerable states in the region. Through prudent military planning, we continue to refine options to protect U.S. and partner interests from Iranian aggression, to deter Iran's destabilizing behavior, and to prepare for contingencies, all while reducing the risks of miscalculation.

There is currently legislation in Congress that has passed the House and Senate overwhelmingly and which would levy new uni-

lateral sanctions on Iran's importation of refined petroleum and also take away much of the President's flexibility to grant waivers. State and—the State Department and the White House are concerned, because the extraterritoriality provision in the bill could undermine our attempts to levy multilateral sanctions. This is a highly sensitive issue, but we hope to move forward with it.

So, it's a combined effort at trying to limit Iranian capabilities and build support in the region to dissuade the Iranians from proceeding down this path. We have intensive discussions going on in New York now, with the United Nations, to craft language of a U.N. Security Council resolution which will provide meaningful sanctions against the Iranian government.

Senator LEMIEUX. Well, I think we all would like to see meaningful sanctions. Up until this time, that has not been achieved. We know that the President, from what we read, is being—is working on it with China and Russia, and we hope that that comes about. But, we also know that the last time that we worked to bring the world community together to stop a country from—a rogue country from gaining a nuclear weapon, it didn't work. And that was with North Korea. So, when—if we continue on this path, and we—you know, hope springs eternal that sanctions will work and that we will change Ahmadinejad's mind, which seems unlikely to me; but, if we don't—you talked about, a moment ago, military planning and contingencies. Can you elaborate on that?

Dr. NACHT. I'll just state what Secretary Gates stated on Monday of this week, that he had written a memo that presented a number of questions and proposals intended to contribute to an orderly and timely decisionmaking process with respect to the Iranian nuclear weapons program. In support of the administration's pivot to a pressure track on Iran earlier this year, this memo identified next steps in our defense planning process, where further interagency discussion and policy decisions would be needed in the months and weeks ahead. That's all I'm able to say at this time about planning for contingencies with respect to Iran.

Senator LEMIEUX. Mr. Baker, do you have anything you'd like to add on this?

Mr. BAKER. We're just as concerned as you are, sir. What we're doing is looking all—at all the procurements that may be going into Iran, and trying to stop those procurements. They may be dual-use equipment used for nuclear capabilities. So, we're working that very hard with industry. We know, in an unclassified setting, that there are many procurement lines. We're educating industry on the export-control rules, on the licensing rules, and we're trying to cut off these networks of going into Iran to help Iran build a nuclear weapon. So, we were concerned, we're doing everything, in the Department of Energy, from an export-control standpoint, and with industry, to try to stop any procurement that may be dual-use-type equipment.

Senator LEMIEUX. I want to—I can't stress enough how much this worries me. And I hope—and I would assume that this is a topic of daily conversation in your lives. And I can't think of any other priority that would come ahead of this topic. This is a country that, its leader is openly hostile to the United States of Amer-

ica, openly hostile to our allies in Israel, says he wants to wipe Israel off the face of the map.

Mr. Chairman, I'd like to have entered into the record this Washington Times article from today, which was a front-page story, if I may—

Senator BILL NELSON. Without objection.

Senator LEMIEUX. —with Iran boosting its Quds shock troops in Venezuela.

[The information referred to follows:]

Senator LEMIEUX. At our last subcommittee hearing of this committee, we discussed, in detail—and I would hope that it's something that you all have focused on, and, if you haven't focused on, you will—the gathering storm and alliances between Caracas and Tehran. We know that Ahmadinejad has visited Hugo Chavez several times, that there is a direct flight from Caracas-Tehran, with some sort of extra-airport-type arrangement, where they don't go through Customs, and people come—get off the plane and get on the plane, without knowing who they are. We know that Hezbollah and Hamas are set up in Latin America. We know that our friends in Colombia are dealing with Venezuela, allowing narcotraffickers to fly over their airspace. I had the opportunity—we have—Senator Nelson and I have the great pleasure to have so many military installations in Florida, and I had the opportunity to visit one in Key West this weekend, which is our Joint Interagency Task Force that does phenomenal work interdicting these narcoterrorists. And if you look at the flight paths of these planes, they're all flying over Venezuela. We know that Venezuela is cooperating with the FARC. A Spanish judge has recently come out and said that—in a formal proceeding—that Venezuela was working with the ETA to assassinate President Uribe and his predecessor. And now we find out that Iran is going to put shock troops in Venezuela.

So, I want you all to focus on this topic, because I'm worried about a Iranian attack from the south, not just from the east. And I hope that this is something that you've at least focused on or talked about. And I'd be happy to have any response you'd like to make to that.

Mr. Secretary?

Dr. NACHT. I would just say that the issues you've raised are taken most seriously at the highest levels of our Department and our Government. The Defense Department does not comment publicly on any military planning in which we are engaged. Any specific questions you might have on Venezuela, we can take for the record and we'll get back to you with specific responses.

Senator LEMIEUX. Mr. Baker?

Mr. BAKER. Likewise, sir. You know, again, we're trying to work all the technology, and, like I say, all the procurement networks, which we know pretty well in DOE, to stop—and educating industry to stop anything going into Iran. We're working this hard, in an unclassified setting—we know many of the networks. And what we can do, from Department of Energy, is use our capabilities at the laboratories and our technology capabilities and our connections with industry, which is vast, to educate them on lines of procurement that goes into Iran, to try to stop any dual-use equipment that could be used to help them build the nuclear program.

Senator LEMIEUX. Thank you both, gentlemen.

Mr. Chairman, I have other questions, but I want to defer to you, if you—I know that you'll have questions for our panel, here, and perhaps I'll have an opportunity to ask some more questions later.

Senator BILL NELSON. Mr. Baker, you mentioned—in the programs that the NNSA has to prevent Iran from getting materials and technology, you mentioned the export controls. Talk to us about the support of the IAEA, and talk to us about preventing nuclear smuggling.

Mr. BAKER. We're doing very much on nuclear smuggling, sir. We have many programs that help this.

Number one, we have what we call a second-line-of- defense program that is put on borders—radiation detections is put on borders of countries in Russia and also the former Soviet Union. And what we do is stop things, at the border, that may be smuggled out of the country. Right now, have identified 650 sites that we're trying to put radiation detection in, and we have done 400 of them, completed.

What we're doing in Russia—and Russia is paying for half of this—and we're paying for the other half—every spot around Russia, about 200 spots, we have put a fence around Russia with radiation detection, to ensure things cannot be smuggled out easily.

We also are working seaports. We have 100 seaports that things are coming to the United States that we are trying to put radiation detection in. We have finished 27 of them. We will have another 13 done this year. So, we're—and we'll have the whole system done by 2015, all the megaport issues.

We also work in export control. We are educating people on licensing of dual-use equipment. We're educating industry. We're educating the enforcers of export control laws on the danger of this stuff getting out.

We have, sir, as you probably know, some cases in the past—I can't say much here—that things have been caught by our systems, on the borders of Russia, that we've caught already.

So, it is a system that is working pretty well. It's—well, like I say, we got to have triple phenomenology, if I can use that word, that we try to protect it at a source, but if that fails—and an insider is a big problem, we know, that could try to get this stuff out; they know the vulnerability of the system—so, we can stop them at the border or stop them at the seaports, and also educate everyone on export-control rules. And it is, hopefully—you don't ever know what you don't know—but, hopefully, we're getting this done as quickly as we can. It's a very critical area.

Senator BILL NELSON. Would you characterize the cooperation by Russia, and characterize the cooperation of the host countries in those seaports?

Mr. BAKER. On—with Russia, I can't tell you, with the Customs people in Russia, a better relationship. I have the relationship right with the head of Customs. He is really, really good to work with. There's parts of Russia—it's tougher. But, Customs and putting this border security system up around Russia, they've been very cooperative. They're just as scared as we are. And it's worked really well in the nuclear smuggling area.

On seaports, it's a little tougher. But, we know where they're at. When we go in and explain what we're trying to do to help to keep things coming from the United States, we're—it's a little tougher, but we're succeeding. And just this last summit, we had a megaport agreement signed with Italy, we had a megaport signed with Argentina. And it is working. We have, if I can say this, sir, right now, more agreements than we have money right now, on megaports. So, it is working. It's a little different, a little more difficult than it has—is with Russia right now, on the Customs. But, it is working. And I want you to know we're doing everything we can to make it work even better.

Senator BILL NELSON. Describe the historical relationship with Russia, going back to Nunn-Lugar.

Mr. BAKER. I've been working with Russia for a long time. It was—in the Nunn-Lugar days, it was tougher. Russia's—Russia didn't trust us. They knew that they needed our help, because—I've gone into Russia, sir, in the middle-'90s, and I've seen things that I would like to tell you in person, that I don't want public. It was a scary time. When the Berlin Wall came down, many things became vulnerable, and Russia needed our help. They needed our help with giving clothing to the Guards that guard the nuclear weapons. They—we had to build an accounting system for them. We had to build a regulation system for them. We worked really hard.

But, now, today, it seems like Russia has gone on personalities, many times. I've seen things that I've never thought I see, and I used to be war-planning advisor to President Reagan in the White House, so I was the guy that wrote the football for the President, and I saw things I used to target. They would show me these things. They know my background. But, I've been working with them, they know we're there to help them, we—and they know we're there as—not spies, even though I've been called that before. But, they—the relationship has really improved over the years. It got a little tougher after the invasion of Georgia. But, Russians said, and we said, regardless of what happens with things, our work has got to continue. This is the security of two great countries. It's our national security. Many times, people ask me, "Why are we doing this in Russia?" It's our national security that we're concerned about, one getting over here.

So, it has been tough at times, but we've succeeded. And I—again, you don't know what you don't know, but they have shown us things that I've never seen. We've been in warhead sites. We have—they took myself in a place called West 19, not very long ago, where all the warheads are. And when Dr. Condoleezza Rice was here, she said that was the worst site she ever saw. We fixed it. And now it's just as good as Pantex or one of our facilities. And we're getting ready to take OMB to that site to show them the type of work that we did on West 19. So, we've seen things. They opened up to us.

Now, when is the window going to close? I hope not. There's a great relationship between President Obama and President Medvedev. But, we know in 2 years, or 2 and a half years, they're going to have an election in Russia, and there's two guys going—two guys running, and—or one of them is going to win. And I

think—I know the one who's going to win if they both run, but it is really a great relationship. President Medvedev and President Obama agreed, at Prague, and also agreed in this summit, that they will work closely together, because nuclear terrorism is the biggest thing there is, and they both want to stop this.

So, we have, right now, a bilateral commission, headed by Secretary Clinton and Lavrov. I work, with my boss, Dan Poneman, Deputy Secretary—we work all the nuclear security in Russia, and the nuclear energy. And what we do, every 6 months, we lay out what needs to be done in Russia, from a security standpoint, and then we report on what we've done. Six months. I just met with him 2 weeks ago—3 weeks ago—excuse me—and we have another report. We'll do another report in June.

So, from this checklist—and this checklist goes to Secretary Clinton and then goes to the President, to see everything we're doing in Russia and how we're accomplishing—it's like a metrics—go.

So, the—it's a long answer to your question, sir, but I'm optimistic it will stay good for the next 3 years, and hopefully we can get all the work done in Russia very soon.

Senator BILL NELSON. And how about the other parts of the old Soviet Union where nuclear weapons and materials were kept?

Mr. BAKER. The other parts of the Soviet Union have been pretty good. Right now, we're blending down all the HEU in Kazakhstan. We're getting ready to do that, on this Global Threat Reduction. We have an agreement, that came out of the summit, from Ukraine, that I'll—we have can have all their HEU and bring it back—their highly enriched uranium. We're taking HEU out of Poland. We've—we're also taking highly enriched uranium out of Belarus.

They've been cooperating pretty well. I can't give you an example. It's hard sometimes. It's really hard. And we've got to work with them. And sometimes you have to give them a little more money than you wish you could, to get the stuff out. But, it's our National security. And if you look at DOE's budget on this, compared to the defense budget, well, you can't even see it; it's a little squeak. It's very low for, in my opinion, the biggest threat this country faces, as Dr. Nacht said.

Senator BILL NELSON. All right. And let's address our support to the IAEA.

Mr. BAKER. Yes, sir.

We're—we are building more and more support to the IAEA. The IAEA needs help. They need technical people. And we're getting people from our laboratories to volunteer to go and work. Another thing they need, bad, is new safeguards. Right now, we have a new safeguards initiative that is educating more people, expertise, better technology, and measurements and everything else, and also better concepts on safeguards.

For the last 30 years, we live with safeguards that should have been updated. But, now, during the nuclear renaissance, we've got to build better safeguards for the IAEA, so we're building that. And that's going very well. This committee has supported us very well in that. And we've got a 5-year window that we're building technology. We've got 200 interns, right now, post-docs, learning safe-

guards, so we'll have—we won't have a brain drain on this for the IAEA. So, this is going very well, with the IAEA.

Also what we're working with IAEA is the Convention on Physical Protection. They call it IAEA 225. And that regulation—and this is what the IAEA makes all countries that have nuclear material hold to; this is what they check—we're updating that to make it tougher. After 9/11, we had to change things. So, we're almost there, in a new 225—Rev. 5, we call it. The President said this. He got commitment, out of all 47 members that were here at the summit, that they would push Rev. 5, 225. It's in 120-day review period right now.

So, we're helping the IAEA have better safeguards. We're trying to give them more technology. The President said that in Prague, that he wanted to support the IAEA. And I think we're doing that, to the best of our ability, to give them what they need to do their job.

Senator BILL NELSON. Thank you, Mr. Baker.

Mr. BAKER. Yes, sir.

Senator BILL NELSON. Senator LeMieux.

Senator LEMIEUX. In terms of trying to secure the nuclear stockpile of the world, weapons-grade uranium, I would assume that, when the Soviet Union fell and the cold war ended, then we started our relations with Russia, that some kind of accounting was undertaken to determine where everything was. Do we have confidence that we know where all the weapons-grade material is in the world?

Mr. BAKER. I think we do now. I think I can say, in an opening hearing, that when we started this work in 1994, they didn't even know. And we started it, and we've built procedures—trying to keep this unclassified—

Senator LEMIEUX. Yes, sir.

Mr. BAKER.—procedures that we know where the material was located. Now, again, sir, you don't know what you don't know, as I say. But, we think we have a good handle on it.

Russia, I think, would admit, back in those days, they did not have a handle. We saw this when we went in there. And I think today we do in Russia.

Now, we also think we know where all the HEU is in the world. We have a document, done by our Global Threat Reduction agency, that shows where we think all the highly enriched uranium is in the world, also.

So, we feel we have a pretty good handle on that. One thing we have not been able to do in Russia is to get into their serial production plants. And these serial production plants—they won't let us in—is where they build weapons. And we've secured about everything—or we will—out of—we have 19 buildings to go, and then we're finished, and then we'll get into the sustainability area, which we're working right now in Russia.

So, we've completed 210 of them. There's 229. So, in this '11 budget, we're asking for money to finish these 19 buildings in Russia. All the Ministry of Defense work is done. The warhead sites are done. We've—we took half of those and secured those, and Defense took the other half and secured them. And, like this West 19

I was telling you about, it was a facility that we did. And so, they're secure.

So, we think we have a fairly good handle on it. Matter of fact—I'll leave it at that. Fairly good handle. We don't know, maybe, if we got it all. But, we do have a document that shows where it's at in Russia. We do have a document that shows where the HEU is throughout the world. And in our Global Threat Reduction Program, our goal is to ensure—to protect 200 reactors. That's our goal. And right now we're—we've—we have converted 63 of them. We converted or shut down 71 of them, together. We—some of them just shut down; we didn't have to convert them.

Senator LEMIEUX. Can I interrupt you for a second?

Mr. BAKER. Yes, sir.

Senator LEMIEUX. The 200, is that focused on ones that can create material that can be used for—

Mr. BAKER. Yes, sir.

Senator LEMIEUX. —as opposed to just ones that are for domestic—

Mr. BAKER. All of this is—

Senator LEMIEUX. —electric production?

Mr. BAKER.—is that they can make a weapon. This is highly enriched uranium.

Senator LEMIEUX. Right. So, you're not only—mapped out where all the material that's already existing may be, and then, therefore, trying, also, to reduce that material—

Mr. BAKER. Yes, sir.

Senator LEMIEUX. —but you're also trying to secure the areas where it could be created—

Mr. BAKER. Yes, sir.

Senator LEMIEUX. —so that it doesn't get out into the—

Mr. BAKER. Yes, sir.

Senator LEMIEUX. —world.

Mr. BAKER. Yes, sir. We are.

Senator LEMIEUX. What efforts, if any, has the United States undertaken with China to work in a similar collaborative fashion as we are doing with Russia?

Mr. BAKER. I can tell you what we do in China, in the Defense—China is a country that many people think ought to pay their own way. We have worked with the civilian sector of China; we have not worked with the military section. And what we have done with the civilian sector of China—one, we have—China has converted two of their reactors from highly enriched uranium—on their own; they paid the money, \$30 million—to low enriched uranium. We have four neutron reactors in China that we want them to convert. They have to have a special type of fuel to convert these. So, we're helping them build that special type of fuel to convert these reactors. And from these neutron reactors, there are other places, like Pakistan and other ones, and we're going to try to convert them.

We have what we call a "Peaceful Uses of Nuclear Technology," called PUNT, in China, and that's to work with them on safeguards, to educate them on export control, to educate them on nuclear technology, on dual-use equipment. So, we have worked that with China, and, basically, no cost to us. We have—ran a prototype on a megaport in China. One megaport. They paid for the equip-

ment. We provided the expertise. We hope to do more in China, besides one megaport. But, they wanted to see us—how to do one.

So, what we have right now is a goal that China will pay at least 60 percent of this, and maybe 70 percent of the work we do, and we pay the 30, or-whatever, percent left.

So, China is not going to be a Russia, at all, but we are working with them on these things that are so important, like nuclear smuggling. And it's gone fairly well, and we hope to do more. But, on the military side, they don't want any part of us.

Senator LEMIEUX. One final topic I'd like to raise with you, and—kind of going back a little bit to what we first started with. We know that there are countries who are going to want to have nuclear power. There are peaceful countries. I have a list here of the countries around the world who have nuclear reactors, some in places that I didn't know had reactors, a total of 437, according to this document from March 31st, around the world.

Right now, Iran's saying it wants, you know, nuclear energy for peaceful purposes. We doubt that very much. But, what happens? What should we be doing, going forward? I know, Secretary, you've made a career out of studying policy. This seems to be about as difficult of a policy question as one can imagine is, when we have difficult states, when we have rogue countries, when we have, you know, Iran—but it's not going to just be Iran, it's going to be Syria, it's going to be Venezuela, it's going to be other countries that are going to say—and they're going to down this same path that North Korea went down and Iran is on, which is, "Well, we want it for peaceful purposes," and then all of a sudden there's a bomb.

How do we, as part and leader of the international community, handle this trend, which we know will occur? Is there a way that we can set up some kind of international regime that will deal with these types of states, wanting nuclear energy, which we will—believe will be pretextual for them obtaining a weapon?

Dr. NACHT. Thank you for that question, Senator. I mean, the whole premise of the Nuclear Non-Proliferation Treaty was to facilitate the growth of use of nuclear energy for peaceful purposes while closing off the nuclear weapons option. And despite all of our difficulties with Iran and North Korea in recent years, actually, all things considered, up to now we've been rather successful. There are only a handful of countries that are not members of the NPT or have really not behaved properly with respect to the NPT.

We hope that, in the NPT Review Conference next month in New York, that one of the outcomes will be a strengthened treaty regime, which will make it more difficult to withdraw from the treaty and which will provide more incentives by strengthening the IAEA for growth of peaceful programs while closing off the nuclear weapons option.

Also, in the Nuclear Posture Review that the Department just recently produced, we note that countries that are in—that are non-nuclear-weapon states and that are in full compliance with their nonproliferation obligations, that those countries would not be the subject of use or threatened use of nuclear weapons by the United States. Whereas, countries that are not in compliance with their nonproliferation obligations, as Secretary Gates said, all options for

the United States are on the table. So, we are providing both incentives and disincentives for states not to go down the nuclear road.

We know that some states are concerned that, if Iran acquires nuclear weapons, that their security is threatened, that it might stimulate their own interests, and we're working very hard, diplomatically and with our own counterparts at the military level, to ensure that they are—especially our allies and partners—that they're secure.

Senator LEMIEUX. Significant concern of an arms race in the Middle East with countries like Saudi Arabia and others—

Dr. NACHT. Yes. I mean—

Senator LEMIEUX. —who wanted weapons.

Mr. NACHT.—prominent figures in the field, like Bill Perry and others, have characterized the current situation as a tipping point, where, perhaps, if—several additional states could go down the nuclear road if we don't solve this problem. So, we're very aware of this, and we have a wide variety of activities underway with every one of these governments to try to provide the incentives and assure them that it's really not the way to go, to go down the nuclear path.

This is even true with our NATO allies. You know, we have several European countries that looked at nuclear options, years ago, and they foreswore them because they're under the nuclear security guarantee of the United States as part of Article 5 of the NATO treaty. We don't want any of those to rethink their idea, so we want to, in fact, strengthen our extended deterrence relationships with every one of these countries. So, it's really—it's a multifaceted strategy.

At the same time, we realize that, because of climate-change concerns, because of fossil fuel supply uncertainties, for a variety of reasons, nuclear energy for peaceful purposes is probably going to grow, and perhaps grow quite considerably over the next several decades. So, the challenge will only increase for us, increase for the IAEA, increase for DOE and DOD, to play a meaningful role, to make sure that: peaceful path, no problem; weapons, not desirable, not permitted. And it's—and the strategy keeps evolving, because the players evolve, the technology evolves, and some of the policy issues evolve.

Senator LEMIEUX. I mean, I think the challenge we have is that, as we progress in the modern world for some of these rogue states, having the capability of nuclear power, even, is a marquee; it is a—it's something that brands them in the higher echelon of states around the world. And they want that branding. And it's one thing for a country to agree not to be—you know, "We're—okay, we're not going to seek nuclear weapons," but when you can't trust the country to start with, and they're, say, a country like Syria, now, who we believe is, you know, assisting—further assisting in getting missiles to Hamas and Hezbollah, and if a country like that says, "Okay, well, we want a nuclear power plant for peaceful purposes," well, just like with an Iran, you don't believe them. So, how does the world community set up a structure—and maybe this is part of what you're working on—ahead of the problem so that we're not being reactive to a country that now says, "We're building a reactor, we're building a nuclear power program"—how do we get

ahead of it so that there's some kind of sanctioning that's going to have to occur for, not just, "We want to have a weapon," but, "We want to pursue nuclear energy"?

Dr. NACHT. So, again, the country that you mentioned, Syria, is a member of the nuclear nonproliferation—is a part of the Non-Proliferation Treaty. If they want to move further into the "nuclear energy for peaceful purposes" area, they have to work with the IAEA, which is to facilitate their work, but to ensure that there's no weapons activity related to this peaceful purposes.

Mr. BAKER. You know, there are hundreds—

Dr. NACHT. And we need to strengthen the IAEA, as Ken Baker has said, because they don't have enough resources and enough capability at the moment to do the kind of job we all think is needed. But, at the same time, we have to demonstrate, perhaps with other countries, like Iran, that—which Syria will pay close attention to—that, to move down the road will incur tremendous disadvantage, tremendous pain to them, so that there's—they should have no incentive of any kind to think about diverting any peaceful nuclear program for weapons.

Mr. BAKER. You know, there are 189 countries that are members of the NPT, and Article 2 of the NPT says they can build nuclear power for peaceful uses. And what we're doing—DOE's doing—one, is this Advanced Safeguards Program that we're trying to give the IAEA. Once they get nuclear power, proliferation becomes a bigger problem, so the IAEA challenge, as Dr. Nacht said, is greater. So, we've got to give them better safeguards.

We also are helping countries have a better export control system. We're working with multilateral, with many countries, getting tighter control on nuclear weapons. But, if they're a member of the NPT, and Article 2 says they can do that, as Dr. Nacht said, you can't very easily stop them, but you've got to have controls, you've got to give the tools, capabilities to the IAEA to make sure it's—they're not doing something else.

Senator LEMIEUX. Iran's—

Dr. NACHT. There's also—

Senator LEMIEUX. —a signatory to the NPT, right?

Mr. BAKER. Yes, sir, he—she—I mean, they are.

Senator LEMIEUX. And North Korea was, and then they backed out?

Mr. BAKER. They've withdrawn.

Senator LEMIEUX. So, if there's no teeth on the back side of this—

Dr. NACHT. Sir, this is what we're engaged in right now, which is a tough sanctions program that we're developing toward Iran, and a tough sanctions program that's been implemented and may further be strengthened against North Korea.

And to have targeted sanctions, to have penalties to the leadership, penalties to those who make the decisions, in order to, hopefully, change their policies.

Senator LEMIEUX. Thank you, Mr. Chairman.

Senator BILL NELSON. Dr. Nacht, the DOD Cooperative Threat Reduction Program is also going to play a role in the global lockdown effort. What is the DOD plan to achieve that goal?

Dr. NACHT. So, we're currently engaged in several activities, and we're seeking additional funding for cooperative threat reduction, specifically related to the global lockdown. Funding for spent naval fuel and fissile material disposition in Russia—several of them are Russia-related; site security enhancement in Russia; automated nuclear warhead inventory control in Russia. These are building on longstanding programs we've had—CTR programs we've had with the Russians. And, by the way, I should add in response to some of the previous questions, the Department of Defense's relationships with the Russians, at multiple levels, is really quite good, from the very highest levels of military officials and political leaders, to people in more technical capacities and people at the working level.

In addition, we are—as part of the global lockdown, we are seeking funds to establish a—Nuclear Security Centers of Excellence outside the former Soviet Union, one in India and one in China; each has somewhat different objectives. These centers will assess equipment and manpower, they'll provide material security training, they'll demonstrate enhanced security procedures and processes, they'll provide lessons learned, without having to be directly at the site of where weapons are located.

So, again, it's an effort to work together and to enlist, in these cases, Indian and Chinese support, which is central as trying to facilitate the global lockdown.

By the way, I should also add that—in response to a previous question—there was a strategy—in developing the strategy for the global lockdown, which has been in place—you know, the work for the global lockdown that just happened has been in place for a long time—there was an interagency assessment that was commissioned, and a comprehensive classified assessment was done, of where the material is. We can't say for certain that we know where everything is in every country, but we're quite confident that it provides the sound basis for moving ahead on the global lockdown process.

So, a number of activities in Russia, and some new centers outside of Russia, are the elements of—it's about \$74 million in additional funding for how CTR, Cooperative Threat Reduction, will contribute to the global nuclear lockdown.

Senator BILL NELSON. And what about in those countries of the former Soviet Union, outside of Russia?

Dr. NACHT. Well, we've had longstanding activities there, where we've been involved in Kazakhstan, for example, and in a number of other countries of the former Soviet Union. We're also—you know, as part of—CTR was not only nuclear—we're deeply involved on the bio and chemical weapons side, as well, and there's a lot of consultation activity in trying to identify sites, build support for the Biological Weapons Convention and the Chemical Weapons Convention verification procedures. So, it's a multifaceted activity, in a number of countries, for nuclear, chemical, and biological weapons.

Senator BILL NELSON. So, all of the areas that the Soviet Union had nuclear material and weapons, outside of what is, today, Russia, you feel good about a lockdown?

Dr. NACHT. Well, I mean, we're very intent on achieving the President's goal of locking down this material in 4 years, but it's tough. I mean, we learned about uranium in Kazakhstan, quite a long time ago, and it didn't actually initially come through the intelligence community. You know, I think it would be misleading to say that it's going to be a totally comprehensive, air-tight system that we know of in advance. We're going to have to roll up our sleeves, work in these countries, work with them, and build momentum, and show that cooperation in the global nuclear lockdown is in everybody's interest. And I think—as we do that, I think we have very—you know, we're very hopeful that we can achieve the President's goal.

Senator BILL NELSON. Would you provide to the committee, in classified form, your analysis, or analyses done previously, in between the time that the Soviet Union was disintegrating, in late 1991, up to when the Nunn-Lugar program started, where you all, in Nunn-Lugar, were actually on the scene? And would you share with the committee, in classified form, the obvious questions—the answers to the obvious questions? Was that material secured? What possibly was not secured? What is its viability today, if it were unsecured, and so forth?

[The information referred to follows:]

Senator BILL NELSON. Thank you very much for doing that.

Now, are the global lockdown activities of the CTR program and the NNSA programs—are they coordinated?

Mr. BAKER. I can start. I can say, absolutely. Coordination has been good, the last few years. One example is the Ministry of Defense sites in Russia. When Russia said, "Come in and do our war-head sites," we worked with Defense Department. And like I so told you, sir, that we did half of them, they did half. We coordinated very well together. On this 4-year lockdown, as Dr. Nacht said, we will get the job done. And we have decided, basically, what lanes we're in, who's going to do what, and where. We meet with Defense quite often. Matter of fact, we got a big meeting with Defense just tomorrow, to discuss this 4-year plan even more. So, in my opinion, from a DOE perspective, it is working extremely well.

Dr. NACHT. Yes, and I would say, really, the same thing. And, you know, sometimes cooperation in some areas leads to cooperation in other areas. For example, we've just gone through a very intensive experience producing the Nuclear Posture Review, and there was really intimate involvement by NNSA and the NNSA leadership and the DOE leadership in the production of that report. And so, you know, all the signals, all the incentives, from the top leadership of our Departments is to encourage more collaboration at other levels, including in CTR, which has been going on very well for many years. And we know we have to work together, because we each bring different perspectives and different expertise to the table.

Senator BILL NELSON. Mr. Secretary, does DOD know the full extent of the material involved in this effort for which you all have responsibility?

Dr. NACHT. For the global nuclear lockdown? Yeah, as I mentioned, there was a major study done before the rollout for the global nuclear lockdown, and that is really the—it's a classified study—

that is the basis for our understanding of what we have to go after to achieve the President's goal in 4 years.

Senator BILL NELSON. And—

Dr. NACHT. And that's been shared with the interagency.

Senator BILL NELSON. And your testimony is that you think that other countries are sharing our U.S. concern about these materials.

Dr. NACHT. I think, absolutely, that—I think the President has been extraordinarily effective in communicating the seriousness of this problem. Even as recently as a few years ago, Russian—prominent Russian figures spoke openly about their skepticism about nuclear terrorism. And they were happy to work with the U.S. on securing some of their—on securing their own sites, but they didn't really think that problem, at least, was their problem. And now, I think they're fully aware—I know that they're fully aware of the seriousness of the problem, both because of the nuclear proliferation issue that we've discussed already, and also because of the terrorism issue that they're—that they've experienced in their own Moscow subways.

So—and the President, through the combination, even recently, of the Nuclear Posture Review and completing the new START Treaty and the Nuclear Security Summit, all leading up to the Nuclear Non-Proliferation Treaty Review Conference, and his statement earlier last year, in September, at the U.N., at the opening of the General Assembly, all are really having an effect on heightening awareness and support around the world for this problem. And, as we know, I mean, 47 national leaders, in the U.S., the largest group of its kind since San Francisco, in 1945.

Senator BILL NELSON. I must—

Mr. BAKER. I think—

Senator BILL NELSON. I must say that I was pleasantly surprised that, on fairly short notice, that many leaders showed up.

Dr. NACHT. Right.

Senator BILL NELSON. So, it does, indeed, express their concern.

Mr. BAKER. I think, sir, that this summit, at least in my experience in nonproliferation, was the biggest thing ever happen. I do believe, like Dr. Nacht, that they all are committed, they all are just as scared as we are. And if you look at the summit initiatives that came out of the summit, it was more than we expected. Some people in the White House said it was five times better—won't name names—five times better than ever thought it would be. And I do think—and if they're going to do this again in 2 years, in South Korea, it's going to keep emphasis high in nuclear security.

Senator BILL NELSON. I think you're right. And I think what they're waking up to is, if a terrorist attack can occur in the Moscow subway, it can occur anywhere.

Mr. Baker, is Russia fully committed to taking back the original Russian material?

Mr. BAKER. Yes, sir. We have taken back most of it. We've got some left. But, they are—they have been really easy to work with. What we have, every 6 months we go to Russia, or they come here—most of the time, we go to Russia—we lay out the schedule for the 6 months, on takeback of Russian fuel. This has worked very well. We had some complications, like we can't pass fuel through Kazakhstan, so we had to take some of it by train, and

then by boat, around to Mayak, where it was going to be stored. But, we've got it there—Russia is on board with us, sir, 100 percent.

Senator BILL NELSON. And are other countries willing to pay part of the cost to secure this material?

Mr. BAKER. On this, most of the costs have been with us. They're willing to give up the highly enriched uranium, if we can convert the reactor to low-enriched uranium, but most of the cost, on this Russian takeback, has been on our shoulders.

Senator BILL NELSON. What about enriched plutonium?

Mr. BAKER. Plutonium, we have an—we've got a little plutonium that we're trying to bring back, or bring back someplace, from one of these countries, of which I'd rather not say in public. But, plutonium will—we've got this agreement, now, to get rid of 34 tons. I know that's not all of it, but, I think, as this goes along, and they burn 34 tons and we burn 34 tons—like I said, that can make 17,000 weapons—in my opinion—time will tell—they will continue to burn more and more plutonium in the reactors, just like we will continue. So, hopefully, the momentum will not stop with 34 tons of burning plutonium in each country.

Senator BILL NELSON. Mr. Baker, you had talked earlier about the disposition of 34 metric tons of weapons-grade plutonium by converting it to the fuel for the commercial power reactors. And the facilities were originally supposed to be operational by now, but now they've been delayed til '16. And it's a hefty cost. The GAO completed a report that found that the project may not have enough plutonium feedstock. What is NNSA planning to do to make sure the plutonium is available?

Mr. BAKER. Sir, we're working that problem right now. We have, we know, 9.6 metric tons of plutonium right now that we can burn. It depends on how fast you burn it through the MOX system. The MOX system is able to burn 3 metric tons of plutonium a year in their reactor. So, we do have a problem on feedstock. We're working that right now. We've—trying to find out where—because the pit disassembly plant has been delayed, and we haven't even gone to critical decision one with the pit disassembly plant. And we're concerned, but we're working that problem hard. We've got both environmental management people, in the Department of Energy and NNSA, working together to make sure we have feedstock to burn through that MOX system when it comes on in 2016.

But, it is a problem, and I will keep you advised, sir, how we—how we're working this. And hopefully we'll find a solution for it.

Senator BILL NELSON. Dr. Nacht, DOD is now doing a task force that is going to be available to destroy weapons of mass destruction. Tell us how it's going to be organized, who's going to participate, how are they going to be trained, what is the needed funding.

Dr. NACHT. Thank you, Senator. Yes, we've requested \$22 million, initially, against this effort. This is the Joint Task Force on Elimination headquarters, which would be developed in conjunction with SOCOM, to locate, characterize, secure, disable, or destroy WMD in, potentially, a conflict or other semi-permissive environment, not a peaceful environment.

Our Quadrennial Defense Review identified preventing proliferation in WMD as a top priority for DOD. This is the first time, real-

ly, that this has happened. And that's also having an effect on senior civilians in the Department, on senior military, the combatant commanders, and others. They are elevating, in their own minds, in their own activities, their own planning, stopping and dealing with WMD in their daily work.

Having called it a top priority for DOD, we're now establishing this study headquarters for WMD elimination. The Joint Chiefs of Staff study is underway. The Secretary of Defense will make a decision, down the road, about the precise nature or the characteristics of the center. So, all I can say is, we're in the early stages of studying how this would be set up.

But, a Special Operations Command will be a central player in these activities.

Senator BILL NELSON. And how does this fold into the lessening of warheads that will be required under the new treaty?

Dr. NACHT. That's a somewhat separate activity. I mean, we have a treaty with the Russian Federation, assuming it's ratified by the Senate and the Russian Duma, that will enter into force sometime this year. And that will lead to the reduction of the number of deployed strategic nuclear warheads. Those reductions will take place by the respective governments and will be verified, both collaboratively and by national technical means of both sides. So, that's, you know, something we have a lot of experience on, going back to SALT I, back in 1972. We have almost 40 years of experience of doing this with the Russians. This treaty has its own special characteristics, but I think we're very confident it's a highly verifiable treaty. But, that's separate from this activity, which is really to, if necessary, disable or destroy WMD that's in the hands of folks that we think are very—you know, very antithetical to U.S. national interests. So, it's much of a Special Ops kind of activity.

Senator BILL NELSON. All right. I think what you ought to do is come, also, to the committee, in a classified session, and go through some of that with us. Perhaps—

Dr. NACHT. On the JTTFE, yes. I'm happy to—

Senator BILL NELSON. Yes.

Mr. NACHT.—do that.

Senator BILL NELSON. And perhaps bring in Admiral Olson's folks—

Dr. NACHT. Yes.

Senator NELSON.—on that, as well. And is the CTR program going to play a role in any aspect of that task force?

Dr. NACHT. Yes, I think, absolutely. I mean, the work on Cooperative Threat Reduction and related aspects of dealing with WMD proliferation, there is a community within the Department of Defense—some of our experts are sitting right behind me—Deputy assistant Secretary Hersman and her team, in policy; we have other key people on the Joint Staff that we work with in the services, in AT&L, in Under Secretary Carter's organization, including Mr. Weber, the assistant to the Secretary of Defense for Nuclear, Chemical, Biological Weapons Proliferation. So, we have a whole community, and we work on all of these activities, really, very closely together.

And there's an international dimension. We talk to NATO about this. We're involved with countries around the world through the

Proliferation Security Initiative. So, it's quite—it's comprehensive, but it's really—it's quite coherent. And I think, unquestionably, it is a growing priority for the Department of Defense, reflecting what the President has said, that the likelihood of global nuclear war is low, but nuclear attack is not low, and we need to elevate nuclear proliferation and nuclear terrorism as the top security concerns in the nuclear area.

And the Department is responding. It is responding to this directive.

Senator BILL NELSON. You spoke as if the treaty just announced by the U.S. and Russian Presidents was going to be confirmed later this year. Do you know something that I don't know?

Dr. NACHT. "Hopefully." I said "hopefully," that it—you would consent to ratification in this calendar year. Whenever you consent to ratification. We can't move forward with the elements of a treaty until it—until it's in force. It doesn't enter into force, as you know, until the treaty has been consent to ratified and has been deposited in the National capitals and in Geneva. So, until that is done, there won't be any action taken. We're hopeful that it can be—Senate consent to ratification will be done in calendar year '10, but you would know far better than I.

Senator BILL NELSON. Well, I'm hopeful, as well.

Are both the CTR and the NNSA nonproliferation programs—both of you have requested funds for '11. Can you use those funds in a timely fashion?

Mr. BAKER. The short answer, sir, is, yes, sir. We had very low—last year, in our program that is part of the 4-year plan, uncosted balances. In the Global Threat Reduction Initiative last year, we had 8.6 remaining uncommitted. And the Material Protection Control and Accounting Program, which is securing things in Russia and other places, we had 7.6. We think every penny that the President is asking for can be spent, or most of it can be spent. We will have uncommitted down below double digits. And we are off, as hard as we can, working the 4-year plan.

Dr. NACHT. In the Department of Defense, by far the two biggest areas where we're seeking additional funding are in the—to support the global nuclear lockdown, which we've discussed now at some length, and in the Biological Threat Reduction Program. We've actually cut funding in a number of other areas to reduce the additional amount of funds that we are requesting. And I can tell you, as someone who's personally involved in this, this went through an incredibly intensive scrubbing within the Department, with folks who—in the comptroller's office, with folks who look at program analysis and evaluation, with folks who look at technical feasibility, the policy community, the acquisition community—all worked very intensively to come up with requested funds that were fully executable and they're fully consistent with the President's top priorities.

They also, I would say—you know, funding reflects importance, to some degree; and the fact that there's increased funding for these areas is another tangible signal that the Defense Department is really taking these areas as very high priorities. And the Secretary of Defense is extraordinarily supportive of this effort.

Senator BILL NELSON. In the DOE budget, you have included funds for space-based nuclear detectors. And your budget says that these sensors are going to fly on GPS satellites and on SBIRS. There is legislation mandating the maintenance of the capability provided by these detectors. And yet, the Air Force no longer has the nuclear detection sensor manifested on a SBIRS satellite. What do you understand is the status of these nuclear detection sensors on the SBIRS satellite?

Mr. BAKER. We are still building—and, if I can, sir, I'll give you a more expanded answer for the record, if it's okay.

[The information referred to follows:]

Mr. BAKER. But, we have expanded—we have continued to build nuclear detection sensors. You are right, it's been a struggle with the Air Force on launching these things. And we're trying to work that right now. But, we have a commitment in DOE to continue to build these sensors, and hopefully they will fly on SBIRS one day, or however they get up there. But, if I can, I'd like to provide you a more detailed, classified answer to that question. But, there is a problem here. And I agree with you.

Senator BILL NELSON. Okay. We've had some problems with the SBIRS also, so—

Mr. BAKER. Yes, sir.

Senator NELSON.—let's get into that—

Mr. BAKER. Okay, sir.

Senator NELSON.—in an appropriate setting.

Now, let me ask you, Mr. Baker—the Library of Congress is running a program called the Open World Program. It works with Russia to develop broader understandings between Russian folks and American folks. It's focused on civil society, with extensive judicial, legal, young leaders, and regional and local governmental exchange programs. And it's sponsored nonproliferation programs focused on export controls and technical safeguards.

The Russian participants in these programs have visited our National Laboratories and had discussions about the nonproliferation programs. The Library of Congress would like to continue to partner with NNSA to expand the program to the Ukraine.

So, are you willing to discuss this initiative with the director of the program, to see if there are areas of mutual interest?

Mr. BAKER. Absolutely, sir. It's a good program the Library of Congress is running. We're—Library of Congress has been working with Pacific Northwest's lab and our lab in Oak Ridge. We support our National Labs' involvement, and we will continue to support this endeavor by the Library of Congress.

Senator BILL NELSON. Does any of the staff have any more questions?

[No response.]

Senator BILL NELSON. Okay, gentlemen, this has been a very illuminating hearing. We want to thank you for the hearing. We want to thank you for your public service.

The hearing is adjourned.

[Whereupon, at 11:46 a.m., the subcommittee adjourned.]