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DEPARTMENT OF ENERGY NON-PROLIFERATION PROGRAMS WITH RUSSIA

HEARING

BEFORE THE

COMMITTEE ON FOREIGN RELATIONS UNITED STATES SENATE

ONE HUNDRED SEVENTH CONGRESS

FIRST SESSION

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CONTENTS

DEPARTMENT OF ENERGY NON-PROLIFERATION PROGRAMS WITH RUSSIA

WEDNESDAY, MARCH 28, 2001

U.S. SENATE,
COMMITTEE ON FOREIGN RELATIONS,
Washington, DC.

The committee met, pursuant to notice, at 10 a.m., in room SD–419, Dirksen Senate Office Building, Hon. Richard Lugar presiding.

Present: Senators Lugar, Biden, Kerry, Wellstone, and Bill Nelson.

Senator LUGAR. This hearing of the Senate Foreign Relations Committee is called to order.

This morning, the committee meets to review and hear testimony on the activities of the Baker-Cutler Task Force and its Report Card on the Department of Energy's Non-Proliferation Programs with Russia.

We are deeply indebted to Senator Howard Baker and to Lloyd Cutler for their leadership, and to the members of their distinguished Commission. The Task Force's report has been filed, and the experiences and recommendations outlined therein should be taken very seriously.

As I think all of us on this committee would agree, the gentlemen who headed the Commission, and those who served, have rendered an extraordinary service.

And without further ado I will submit my statement for the record, and turn to the distinguished ranking member, Senator Biden.

[The prepared statement of Senator Lugar follows:]

PREPARED STATEMENT OF SENATOR RICHARD G. LUGAR

Today, the Committee meets to review and hear testimony on the activities of the Baker-Cutler Task Force and its Report Card on the Department of Energy's Non-proliferation Programs with Russia.

No issue better illustrates the new challenges, complexities, and uncertainties faced by the United States in the post Cold War era than the proliferation of weapons of mass destruction. American efforts to slow or stop proliferation are perhaps the most important foreign and national security policies our government is implementing today.

The Cold War was marked by superpower competition in which the United States and the Soviet Union maintained large nuclear arsenals. As terrifying as the nuclear competition was, it had one grim advantage—both nations had the ability and an interest in preventing proliferation and keeping a tight lid on weapons systems. We lived in a world in which nuclear annihilation was disturbingly possible, but proliferation of the technology was highly unlikely.

When the Soviet Union collapsed, a new era in world history began. The strict controls the Soviet government had employed to safeguard these weapons crumbled.

Meanwhile, the failure of the Russian economy has provided huge incentives to sell these weapons or the scientific knowledge of how to make them.

Rogue nations and terrorist groups can now seek to buy or steal what they previously had to produce on their own. They seek ballistic missiles and weapons of mass destruction from the former Soviet Union as a means to intimidate or terrorize their neighbors and deter the United States. This has led many experts to conclude that the current threat environment is less stable and more dangerous than during the Cold War.

In addition to unilateral policies, the United States has attempted to address these threats through a framework of cooperative programs with the former Soviet Union. These cooperative efforts have enjoyed many important successes such as the Nunn-Lugar program's removal of all nuclear weapons from Ukraine, Kazakhstan and Belarus. Over 5,000 warheads have been deactivated and more than one thousand missiles and missile launchers have been destroyed. Large numbers of weapon- and material-storage facilities have received security and safety enhancements or upgrades to safeguard them from possible threats. Other programs seek to employ former Soviet weapons scientists in peaceful projects to reduce the chances of their sharing weapons expertise with rogue states and terrorist groups.

To ensure success, our government must continue to review and identify those efforts that have proven effective and seek ways to intensify these activities. Likewise, we must acknowledge that some policies and programs have not produced the results we had hoped. In these areas, we must alter and improve our efforts so as to achieve meaningful results.

The Baker-Cutler Report was an effort by the Energy Department to review ongoing efforts and to offer recommendations on how to improve its nonproliferation programs. The Task Force recognized that some of the programs were succeeding and others were in need of fine tuning. But most importantly, this distinguished group of experts and leaders came to the conclusion that we must continue our efforts to eliminate these threats at their source if we are to continue to safeguard the American people.

The Bush Administration is reviewing our nuclear arms control and nonproliferation strategy. I am hopeful they will be guided by the Baker-Cutler report's conclusion that the threat from the proliferation of weapons of mass destruction is "the most urgent unmet security threat facing the United States today." We must respond to this threat, and these programs play a critical role in that response.

I am pleased that my friend and former Senate Majority Leader, Senator Howard Baker, has agreed to join us today to share his thoughts on the conclusions that the Task Force reached. He is joined by another good friend, Lloyd Cutler, Co-Chairman of the Russia Task Force. Mr. Cutler is a founding partner of Wilmer, Cutler & Pickering and served as Counsel to Presidents Clinton and Carter.

Following this distinguished panel, we will be joined by Dr. Ron Lehman and Dr. Graham Allison. Dr. Lehman was appointed to the President's Advisory Board on Arms Proliferation Policy and served as Assistant Secretary of Defense and Director of the Arms Control and Disarmament Agency under Presidents Reagan and Bush. He also played important roles in both the International Science and Technology Centers at the Department of State and the Nuclear Cities Initiative at the Department of Energy.

Dr. Graham Allison is a former Assistant Secretary of Defense and is currently the Douglas Dillon Professor of Government at Harvard University and Director of the Belfer Center for Science and International Security. Graham has made tremendous contributions to debates over nonproliferation policy and has the added distinction of serving as a member of the Baker-Cutler Task Force.

Before I yield to Senator Biden for an opening statement or any comments he may have, I would like to insert in the record some briefing materials provided by the United States Enrichment Corporation and Atomic Energy of Canada, Ltd.

Thank you.

[Additional statements submitted by Senator Lugar follow]:

PREPARED STATEMENT OF UNITED STATES ENRICHMENT CORPORATION [USEC]

IMPLEMENTATION OF THE RUSSIAN HEU PURCHASE PROGRAM

(Megatons to Megawatts)

EXECUTIVE SUMMARY

This marks the seventh successful year for USEC as the U.S. executive agent for the 1993 government-to-government Russian Highly Enriched Uranium (HEU) Purchase Agreement. As called for in this nuclear nonproliferation agreement, USEC

and the Russian executive agent, Techsnabexport (Tenex), signed a contract in 1994 that governs the commercial implementation of the 1993 agreement. This 20-year, $12 billion contract facilitates the conversion of 500 metric tons of nuclear weapons-derived HEU into low-enriched uranium (LEU) fuel purchased by USEC for use in commercial nuclear power plants. The program has come to be known as Megatons to Megawatts.

Russian shipments to USEC of weapons-derived LEU commenced in June 1995. Since then, USEC has received 84 shipments of 2,203 cylinders containing 3,303 metric tons of LEU—an amount sufficient to meet U.S. nuclear fuel demand for two years.

These seven years of implementation of the Megatons to Megawatts program clearly demonstrate that both the U.S. and Russian partners have been successful in making this 1993 agreement work. In doing so, the partners have reduced the threat to world stability posed by the proliferation of nuclear weapons and materials.

The results are impressive. As of March 2001:

1. Approximately 113 metric tons of Russian warhead HEU have been converted to LEU fuel and purchased by USEC for use by its electric utility customers.

2. The 113 metric tons of HEU is the equivalent of more than 4,500[1] nuclear weapons—enough nuclear explosives to destroy every large city in the world. The conversion of this material eliminates its potential use as a nuclear explosive.

3. USEC and Tenex are 40 percent ahead of the original 1993, 20-year schedule to convert a total of 500 metric tons of HEU to LEU. This is equivalent to an estimated 20,000 to 25,000 nuclear warheads.

4. No taxpayer dollars are required for this program. USEC pays Russia hundreds of millions of dollars a year for these purchases—a total to date of about $2 billion. Russia vitally needs this hard currency to help offset the falling value of the ruble, to meet the terms and goals of the HEU agreement and for trade purposes.

5. USEC and Tenex have established a strong, flexible, responsive and cooperative working relationship.

6. USEC and Tenex reached agreement in May 2000 on new market-based commercial terms that would begin January 1, 2002, when the current terms expire. The new terms are under review by the respective governments.

These achievements demonstrate that the Megatons to Megawatts program is working. Government nonproliferation and national energy security objectives are being met and sustained by commercial transactions. USEC has proven itself to be highly effective as executive agent under sometimes difficult circumstances. In fact, it has not been smooth sailing during the past seven years of implementing this agreement. A number of contentious issues have emerged, ranging from the appropriateness of USEC's privatization to issues of over payment for, and disposition of, the natural uranium portion of the deal.

Implementation of the contact requires continuing interaction and responsiveness. USEC does not act unilaterally in this process. As executive agent for the government, USEC is subject to an ongoing consultative process that includes direction from the Administration before acting on contract matters.

Still, the agreement has been a success story, and USEC is uniquely positioned to continue as the sole U.S. executive agent. USEC's global customer base, domestic enrichment operations, unique market experience, financial resources and continuing commitment have all contributed to the strong foundation that is essential to support the continuing implementation of this unique and challenging program.

BACKGROUND

With the demise and breakup of the Soviet Union came steadily increasing concerns about the security of nuclear weapons and related materials in the former Soviet Union (FSU). As weapons reduction programs were implemented, substantially greater efforts became necessary for the safe and effective management of the dispersed nuclear weapons, stored weapons-grade materials and nuclear materials removed from dismantled nuclear weapons. These concerns resulted in urgent actions to transfer these weapons and materials from FSU states to Russia for safe disposition.

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[1] The exact amount of HEU required for a weapon is classified information and only estimates are used for illustration purposes.

The U.S. government developed a number of nonproliferation programs to assist Russia with its nuclear weapons and nuclear material security efforts. Clearly, these activities would prove very costly and require significant and ongoing funding that Russia itself can not afford.

The concept of converting highly enriched uranium (HEU) from Russian nuclear warheads into fuel for commercial nuclear power plants was first raised in the late 1980s. The biblical entreaty to turn swords into plowshares eventually emerged as a self-sustaining commercial pay-as-you-go program that established a clear nexus for national security and commercial interests.

To accomplish this, it was essential to provide Russia with badly needed hard currency to keep vital nuclear workers employed and to secure and reduce its stock of nuclear warhead materials. One approach was for Russia to take HEU from its dismantled nuclear warheads and dilute it into low-enriched uranium (LEU). This LEU is useless for nuclear weapons but is suitable as fuel for power plants. Financing this effort was accomplished by the U.S. purchasing the resulting LEU fuel from Russia for use in commercial nuclear power plants. The program literally paid for itself.

By 1992, the Bush Administration had matured this concept through negotiations with Russia into a mutually acceptable framework. This led to the adoption of the 1993 government-to-government Russian HEU Purchase Agreement that required commercial implementation by executive agents.

The U.S. Congress authorized, and the Executive Branch designated, the United States Enrichment Corporation (USEC) as its executive agent, and the Russian Federation designated Techsnabexport (Tenex) as its executive agent. On January 14, 1994, during the Presidential Summit in Moscow, the parties signed a 20-year, $12 billion contract for USEC to purchase the enrichment component derived from 500 metric tons of Russian HEU from dismantled nuclear weapons. This amount of HEU represents the equivalent of more than 20,000 Soviet-era nuclear warheads.

While the 1993 government-to-government agreement and the 1994 implementing contract facilitated the beginning of the process, the startup also brought the parties face to face with substantial technical and financial difficulties. Although the LEU that results from blending down HEU has substantial commercial market value to Russia, Russia did not have the financial resources necessary to process the material. And while it had the necessary facilities, it needed technical support to do what had never been done—to reverse the enrichment process and dilute the more-than-90 percent bomb-grade material down to the 5 percent level with the purity required for commercial nuclear fuel. USEC played a pivotal role in solving both problems.

Through a series of advance payments totaling $260 million, USEC provided Russia with the financial resources needed to initiate the processing of the warhead material. In addition to the financial problems, Russia encountered considerable technical difficulties due to contamination of the HEU that had to be removed in order to meet commercial-quality specifications required by USEC customers. USEC assisted the Russians during 1994 and early 1995 to solve these technical problems. The first shipment of LEU purchased by USEC from Russia was received at the Company's Portsmouth, Ohio plant on June 23, 1995.

ONGOING COOPERATION

While an overall success, this agreement has also had its share of controversial issues and problems, as would be expected in an undertaking of this magnitude. Examples include the debate over the appropriateness of privatizing USEC and concerns that a private sector agent's business motivations would clash with government national security objectives. Another issue was Russia's insistence that it be paid immediately for the natural uranium portion of shipments. This dispute led to the suspension of three shipments by Russia. While terms concerning the natural uranium portion were clearly spelled out in the agreement, ultimately Congress had to act to resolve that situation. While such controversies are often heated and involve various constituencies, the track record shows that they were resolved, and these outcomes auger well for continuing cooperation and problem solving.

Over the course of the contract, as both a govermnent corporation and after July 1998 as an investor-owned company, USEC has accommodated Russian requests for special considerations and flexibility. In fact, there have been 13 amendments to the contract reflecting the parties' ability to make such accommodations.

For example, in 1994, 1995 and 1996, at Russia's request, USEC made payments in advance of delivery of LEU for $60 million, $100 million and $100 million, respectively. The first two payments supported a presidential commitment at the January 1994 Moscow Summit and an agreement reached at June 1995 U.S.-Russia negotiations. The objective was to help Russia finance the provision of nuclear fuel to the

Ukraine in order to secure full implementation of the transfer of nuclear weapons from the Ukraine to Russia for dismantling. The 1996 $100 million advance payment facilitated a U.S.-Russia agreement on enhanced transparency measures.

In 1999, USEC again demonstrated its commitment. In response to a request by Minister Adamov to help meet revenue expectations in the Russian government budget, USEC advanced Russia $173 million. In that same year, as had been done on a number of previous occasions, USEC agreed to accelerate its payments for deliveries to accommodate Russian fiscal needs. There are many other examples of USEC's assistance to its Russian partner. USEC provided Russia with cylinders for the storage of uranium at no cost, established a Russian uranium storage account and assisted Russia in protecting its Megatons to Megawatts assets in the United States. The latter assistance resulted in a presidential Executive Order that provided legal protection for certain Russian assets in the U.S. on the grounds of national security.

INTERRUPTIONS IN SHIPMENTS BY RUSSIA

Despite substantial efforts to accommodate Russia's needs and to facilitate the smooth performance of the HEU contract, Russia unilaterally suspended scheduled delivery four separate times for various reasons not connected with USEC's implementation of the contract. While these suspensions were technically Russian breaches of contract, USEC was able to overcome the impact of these suspended shipments by using its substantial inventory and adjusting its uranium enrichment production schedules to meet customer obligations. But this came at a price to USEC, which was forced to incur additional production costs to compensate for a cumulative delay of 12 months in Russian deliveries to USEC. Once again, demonstrating its strong commitment to the continuing success of the program, USEC has agreed to reschedule delivery of the delayed LEU. These actions could not have been possible without USEC's production capability, inventory and other unique assets.

PRICING CONSIDERATIONS

The 1994 contract called for the executive agents to negotiate price and quantities each year for the following year. Not unexpectedly, this resulted in certain tensions surrounding annual negotiations. In 1996, in a mutual commitment to stabilize performance, both parties adopted a five-year amendment to the contract that set prices and quantities through 2001. While this arrangement solved one problem, it created another. By 1998, an unexpected and dramatic decline in market prices occurred, due in large measure to excess enrichment capacity, lower demand and aggressive pricing by competitors. This resulted in a situation where USEC's purchase costs for Russian material became higher than market prices. In effect, USEC was losing money on each purchase, and the commercial viability of the contract was being undermined. Even so, USEC was determined to sustain the program going forward. It absorbed the financial losses and addressed the issue with the U.S. government and its Russian partner.

The excellent working relationship of the executive agents encouraged candid discussions about this problem over the period of a year. In accordance with guidance provided by the Administration in May 2000, these discussions resulted in an agreement in principle to adopt market-based pricing for the remainder of the 13 years of the contract and, when approved, will go into effect at the beginning of 2002.

The terms of this agreement include the following:

- A discounted, market-based pricing mechanism for purchases of LEU derived from 30 metric tons of Russian warhead HEU each year
- The purchase of an additional amount of LEU from warhead HEU through 2004 that makes up for previous Russian delivery shortfalls
- At Russia's request, the purchase of three million Russian commercial (non-weapons derived) enrichment separative work units (SWU) over five years in order to supplement their revenues during the transition to market-based pricing.

CURRENT STATUS OF THE NEW CONTRACT PRICING AMENDMENT

On January 18, 2001, the Administration authorized USEC to complete the new terms with Tenex. However, the Bush Administration informed the Russian government that it will conduct a review of the overall HEU agreement and the proposed amendment. USEC is awaiting completion of this review. While the current contract pricing terms expire on January 1, 2002, USEC orders for 2002 material from Russia must be placed earlier than that.

The timely adoption of new financial terms—which the executive agents are ready to execute—is essential to maintain the continued success and objectives of the Megatons to Megawatts program. These new financial terms are consistent with the national security and economic interests of both the United States and Russia. These terms will:

- Stabilize and ensure successful completion of the HEU agreement and contract for the remaining 13-year period on self-sustaining financial terms.
- Provide Russia, through USEC purchases, with vitally needed hard currency to pay workers, to finance nuclear safety upgrades, to clean up contaminated sites and to safeguard nuclear materials. USEC payments constitute about 20 percent of the nontax income of the Russian federal budget.
- Ensure that the remaining Megatons to Megawatts Russian HEU, representing an estimated 16,000 nuclear warheads, will be converted to fuel for electric power plants.
- Aid U.S. national security and nonproliferation objectives at no cost to the government.

USEC'S COMMITMENT TO THE ROLE OF EXECUTIVE AGENT

USEC demonstrated a solid and continuing commitment to the Megatons to Megawatts program from its inception as a government corporation through its privatization in 1998, and during its three years as an investor-owned company. As executive agent for the U.S. government, USEC has successfully balanced national security policy objectives with the objectives of its own commercial interests, in certain cases to its own financial detriment, proving that these differing interests can be reconciled and well-served.

USEC remains uniquely suited and committed to its role as executive agent for the Megatons to Megawatts program.

- First, no other U.S. entity can as effectively and expediently implement this 20-year, $12 billion national security program and commercial commitment.
  - — USEC has the best combination of customer, market and financial strength to absorb this large amount of enriched material over time without disrupting the market.
  - — Only USEC has domestic enrichment production capability to continue fuel supplies to customers in the event of future Russian supply interruptions.
- Second, USEC is the only domestic producer of enriched uranium fuel and is committed to ensuring that this production continues to meet long-term domestic energy security objectives. In support of those objectives, adoption of the new market-based pricing amendment will strengthen the global competitive position of USEC's Paducah enrichment plant and its 1,700 employees.
- Third, USEC has a seven-year track record of successful implementation of this contract.
  - — Without exception, the national security goals of the government-to-government agreement and the implementing contract are being consistently met.
  - — As executive agent, USEC has consistently followed the guidance of the U.S. government in the commercial implementation of this program.
  - — USEC has established a rare and continuing record with its Russian counterpart of cooperation, problem solving and long-term trust.

CONCLUSION

As the executive agent for the U.S. government, USEC employees have exhibited pride, flexibility and commitment in implementing the Megatons to Megawatts program. USEC employees continue to ensure the full and timely implementation of the Russian HEU Purchase Program consistent with U.S. policy objectives.

By the end of 2001, USEC will have purchased the LEU equivalent of more than 140 tons of HEU—nearly 30 percent of the 500 metric tons under the contract. This is the equivalent of an estimated 7,000 to 8,000 nuclear warheads.

This historic agreement between the governments of the United States and the Russian Federation is being realized 40 percent ahead of the original schedule and to the mutual satisfaction of both parties. In addition to meeting the objectives of both countries, this agreement has significantly reduced the threat of nuclear weapons and demonstrated the effectiveness of the commercial implementation of this national security program.

MARCH 2001—BRIEFING PAPER ON

THE CANDU MOX OPTION FOR DISPOSITION OF SURPLUS RUSSIAN WEAPONS-ORIGIN PLUTONIUM

ISSUE: *The CANDU MOX option has been identified as an acceptable method for the disposition of excess weapons-origin plutonium by the U.S. Department of Energy ("DOE"), and by officials of the Russian Federation. The CANDU MOX option is not required to assist with disposition of American surplus plutonium; however, it remains an important potential solution to enable the Russian Federation to achieve its plutonium disposition commitments made under the recent U.S.-Russia bilateral agreement on plutonium disposition. As DOE and other U.S. agencies consider steps to achieve the full and prompt implementation of the U.S.-Russia bilateral agreement, it is vital to keep in context the essential international benefits associated with the CANDU MOX option, including acceleration of efforts to dispose of Russian-origin surplus plutonium.*

CONCLUSION: *The CANDU MOX option should receive appropriate attention as a potential solution to the problem of achieving the full benefits of the doubled plutonium disposition rates as defined under the recent U.S.-Russia bilateral agreement. By adding the capabilities of existing CANDU reactors in Canada to the disposition mission, greater progress can be made to address this compelling international issue.*

- *Continuation of the Parallex Project;*
- *Development of a trilateral international agreement on plutonium disposition among the Russia, Canada and the U.S.; and*
- *Inclusion of the CANDU MOX option in ongoing international plutonium disposition planning efforts, including the development of a MOX fuel fabrication plant in Russia with the flexibility to manufacture CANDU MOX fuel.*

I. BACKGROUND

As a result of U.S.-Russia bilateral progress in the field of nuclear disarmament, there is a surplus of at least fifty metric tons of plutonium in each country based on START I levels. The United States government has evaluated policy alternatives for the disposition of excess weapons-origin plutonium, and is progressing towards implementation of a domestic program, while encouraging the Russian Federation and the international community to support parallel efforts in Russia.

In a 1994 study, "Management and Disposition of Excess Weapons Plutonium," the National Academy of Sciences states that "the existence of this surplus material constitutes a *clear and present danger* to national and international security." This statement relates principally to the risk of diversion of Russian-origin plutonium for terrorist or weapons purposes, which underscores the need for the U.S. to pursue policies that support the goal of securing and disposing of Russian plutonium.

DOE has played the central role in developing U.S. plutonium disposition policy, which although focused directly on the disposition of U.S. plutonium, also has clear ramifications for U.S. foreign policy. In the Record of Decision (ROD) for the Storage and Disposition of Weapons-Usable Fissile Materials Final Programmatic Environmental Impact Statement (Final PEIS) released by DOE on January 14, 1997, DOE formally adopted the Final PEIS's preferred alternative to pursue a dual strategy for plutonium disposition that includes both immobilization and reactor technologies. The ROD maintained the option to utilize CANDU reactors for the disposition mission, but conditioned such use on the negotiation of a multilateral agreement among Russia, Canada, and the U.S. In its "Decision" section on page 20, the ROD states:

> *The Department reserves as an option the potential use of some MOX fuel in CANDU reactors in Canada in the event that a multilateral agreement to deploy this option is negotiated among Russia, Canada, and the United States. DOE will engage in a test and demonstration program for CANDU MOX fuel consistent with ongoing and potential future cooperative efforts with Russia and Canada. The test and demonstration activities could occur at LANL and at sites in Canada, potentially beginning in 1997, and will be based on appropriate NEPA review. Fabrication of MOX fuel for CANDU reactors would occur in a DOE facility, as would be true in the case of domestic LWRs. Strict security and safeguards would be employed in the fabrication and transport of MOX fuel to CANDU reactors, as well as domestic reactors. Whether, and the extent to which, the CANDU option is implemented will depend on multinational agreements and the results of the test and demonstration activities.*

DOE has subsequently completed its evaluation of alternatives for the proposed siting, construction, and operation of three facilities in the U.S. for the disposition of up to 50 metric tons of surplus plutonium. In the ROD for the Surplus Plutonium Disposition Final Environmental Impact Statement (SPD EIS) released by DOE on January 4, 2000, DOE selected the Savannah River Site as the location for the three facilities. Based on this selection, DOE has authorized the implementation of a base contract for MOX fuel fabrication and irradiation services, to be conducted by the consortium of Duke Engineering & Services, COGEMA Inc., and Stone & Webster (known as DCS). The ROD indicated DOE would no longer pursue CANDU reactors for the disposition of U.S. surplus plutonium, but that the CANDU option was still being considered for the disposition of Russian surplus plutonium. On page 28, the ROD states:

> . . . Since the SPD Draft EIS was issued, DOE determined that adequate reactor capacity is available in the United States for disposition of that portion of U.S. surplus plutonium suitable for MOX fuel. Therefore, DOE is no longer actively pursuing the CANDU option. However, the CANDU option is still being considered for the disposition of Russian surplus plutonium. To assist U.S., Russia, and Canada in considering this option the three countries are jointly conducting an experiment, which will involve irradiating MOX fuel pins that have been fabricated from U.S. and Russian surplus weapons plutonium in a Canadian research reactor. This effort involves a one-time shipment of a small quantity of weapons plutonium from the U.S. to Canada.

Good progress has been made towards the CANDU MOX experiment, known as the "Parallex Project," being jointly conducted by the U.S., Russia, and Canada. All of the necessary MOX fuel has been fabricated in the U.S. at Los Alamos National Laboratory, and transported to Canada. A larger quantity of Russian MOX fuel has also been fabricated and recently transported to Canada. The experiment in the research reactor is set to begin before the end of 2000. The test is an important demonstration of tri-lateral cooperation, and demonstrates most elements of the infrastructure required to utilize excess weapons plutonium as MOX fuel in CANDU reactors. The test will also contribute to the database that would eventually qualify weapons-origin MOX fuel for use in CANDU reactors.

An important achievement for the overall plutonium disposition program was the signing, on September 1, 2000, of the bilateral *"Agreement Between the Government of the United States of America and the Government of the Russian Federation Concerning the Management and Disposition of Plutonium Designated as No Longer Required for Defense Purposes and Related Cooperation."* Under this agreement, each party shall seek to begin operation of separate facilities in the U.S. and in Russia, not later than December 31, 2007, enabling each party to proceed to dispose of plutonium at a rate of no less than two metric tons per year, with an obligation on each party to dispose of no less than 34 metric tons. The agreement also requires that both parties develop a detailed action plan within one year, including efforts from other countries as appropriate, to at least double the disposition rate (i.e., from two tons to at least four tons per year). It is recognized under the agreement that development of near-term and long-term international financial or other arrangements will be required to support the necessary activities to be undertaken in the Russian Federation.

Based on the above DOE "Decisions," and provisions of the U.S.-Russia bilateral agreement, it is essential that the CANDU MOX option be maintained as an integral part of the potential program for disposing of Russian surplus plutonium. In particular, it is necessary to send the appropriate signal to the Canadian and Russian governments that the U.S. considers the CANDU MOX option to be a potential requirement to achieve the Russian obligations under the bilateral agreement, including accelerated rate of disposition for Russian-origin plutonium.

II. THE CANDU MOX OPTION

Atomic Energy of Canada, Limited (AECL) and Ontario Hydro (now Ontario Power Generation, "OPG") have worked with DOE throughout the PEIS process to support the consideration of the CANDU MOX option B use of existing Canadian deuterium (CANDU) reactors B for the plutonium disposition mission. Under the original CANDU MOX option, MOX fuel bundles (incorporating plutonium from U.S. or Russian dismantled warheads) would be fabricated in either U.S. or Russian facilities (depending on the origin of the plutonium) and irradiated in CANDU reactors operated by OPG. The irradiated fuel bundles would then be stored permanently in Canadian secure facilities, subject to full International Atomic Energy

Agency safeguards and inspections. This concept remains unchanged, aside from the current application being only the utilization of Russian MOX fuel. The Canadian government has made several official statements supporting the CANDU MOX option, and U.S.-Canadian cooperation in this area has been the subject of conversations and correspondence between President Clinton and Prime Minister Chrétien.

Previous technical studies have evaluated three different fuel designs that could be used to implement the CANDU MOX option. Appendix A summarizes the key parameters from the technical studies, and indicates that a single CANDU reactor can consume from 0.8 to 1.5 metric tons per year of excess Russian plutonium, depending on the final MOX fuel design that is selected.[1] No changes to the CANDU reactor plant are required to accommodate implementation of MOX fuel. An addition to the planned Russian MOX fuel fabrication facility would be required to produce between 28 and 80 metric tons of CANDU MOX fuel annually, depending upon the desired rate of plutonium dispositioning. Based on AECL and OPG analysis, the CANDU MOX option has the potential to serve as a technically reliable, cost efficient and secure component of the international plutonium disposition mission.

III. THE CANDU MOX OPTION TO ASSIST THE RUSSIAN FEDERATION

The CANDU MOX option represents one of the strongest opportunities for meaningful collaboration with Russia to achieve symmetrical drawdowns of excess weapons-origin plutonium. Russian officials have indicated significant interest in pursuing the use of CANDU reactors in Canada as one of their preferred options for disposition of their dismantled nuclear warheads. It is becoming clear that the initial target disposition rate of two metric tons of surplus plutonium per year under the U.S.-Russia bilateral agreement, can be met primarily by a Russian domestic program; however, involvement of additional plutonium disposition capacity outside of Russia may also be required. Certainly, to double the rate of plutonium dispositioning, as called for under the U.S.-Russia bilateral agreement, will require involvement of other reactor systems outside of Russia. The CANDU MOX option is a leading candidate to complement the Russian domestic program and to provide the additional reactor capacity required to meet the target plutonium disposition rates. A doubling of the rate of surplus Russian plutonium consumption can be achieved with as few as two CANDU reactors. By harmonizing U.S. and Russian efforts toward the common goal of reducing nuclear proliferation risks, the CANDU MOX option can contribute significantly to the prompt disposition of weapons-origin plutonium in a secure manner.

IV. NEXT STEPS FOR THE CANDU MOX OPTION

A. Parallex Project

AECL is continuing to work with DOE and Russian officials on a project to test U.S. and Russian-origin MOX fuel in a Canadian research reactor, referred to as the "Parallex Project." The enabling contracts were signed between AECL and the Bochvar Institute in Russia and the Los Alamos National Laboratory in the U.S., the two institutions which performed the fuel fabrication for the Parallex Project. The U.S. and Russian MOX fuel fabrication work has been completed, and the MOX fuel bundles from both countries were delivered to Canada at the end of 2000. Irradiation of U.S. and Russian MOX fuel began on February 3, 2001, and provides a tangible first demonstration of parallel U.S. and Russian commitment to the actual disposition of nuclear weapons materials.

B. Trilateral Agreement

DOE's ROD references the development of an international agreement between the U.S., Canada, and Russia as the appropriate mechanism to move forward with the parallel drawdown of each country's surplus weapons-origin plutonium. At the Denver Summit in 1997, the G–7 foreign ministers, including the Russian representative, issued a communiqué referencing the CANDU MOX option. At the Birmingham Summit in 1998, leaders endorsed efforts to maintain the momentum for parallel drawdown of U.S. and Russian surplus weapons-origin plutonium, which is patterned after the tripartite cooperation among the U.S., Canada, and Russia. The Okinawa G8 summit, in 2000, applauded efforts by the U.S. and Russia, while calling for a detailed project plan and arrangements for international financing to be developed over the next year, and prior to the summit in Genoa.

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[1] There are 22 Canadian CANDU reactors in Canada. The decision to consider using MOX fuel in any reactor would be made by the operating utility, based primarily on regulatory and commercial considerations.

The recently concluded U.S.-Russia Agreement on Plutonium Disposition is a significant step forward toward the reduction of the threat posed by surplus weapons-origin plutonium in Russia. As noted above, one of the key outstanding issues that remains to be resolved is how to match the need for rapid disposition with available technical resources that are supported both politically and financially. Therefore, at the same time the U.S. and Russia move forward with the implementation of the plutonium disposition bilateral, steps should be taken to initiate discussions on trilateral agreements to include Canadian support to accelerate the disposition of Russian-origin plutonium.

C. Inclusion of the CANDU MOX Option in Ongoing International Planning Efforts

As plans are developed for increasing the plutonium disposition rates in Russia, in accordance with provisions of the U.S.-Russia Agreement, the CANDU MOX option should be further evaluated, taking into consideration the environmental, technical, and economic factors. At the same time, the U.S. government should coordinate its efforts with its Canadian and Russian counterparts in order to ensure that efforts toward prompt and secure disposition of plutonium are conducted in an efficient and timely fashion. Specifically, the CANDU MOX option should be integrated fully into the international planning for the construction and operation of a MOX fuel fabrication facility in Russia, and the related procurement of MOX fuel services.

APPENDIX A

Summary of CANDU Weapons-Derived Plutonium Management Options

	CANDU MOX Fuel Design		
	37-el MOX (1994)	37-el MOX (1996)	43-el MOX (1997)
Pu-Disposition Rate (metric tons Pu/year/reactor)	1.0	1.5	0.8
Fabrication Plant Capacity (metric tons MOX/year)	80	78	28
Net Pu-Destruction Efficiency (%)	34	23	46
Net Fissile Pu-Destruction Efficiency (%)	58	41	70
Pu-Disposition Rate (metric tons Pu/GW_e.year)	1.56	2.22	1.23
Energy Produced (GW_e.year/metric ton Pu)	0.64	0.45	0.81

Senator BIDEN. Thank you, Mr. Chairman.

I, too, will ask consent for my statement to be placed in the record.

And I begin by congratulating you, Mr. Leader. I not only thought you were the best leader, and I have said it publicly, but now that you are out of the Senate, it does not hurt your reputation any more that in the 28 years that I have been here, I have found you one of the finest people I have ever served with.

I just warn you, you are going to have a rigorous hearing for U.S. Ambassador to Japan; it may take all of about 12 seconds. But I congratulate you on being willing to take on that responsibility. I am truly appreciative.

Lloyd Cutler is one of the most well-spoken and knowledgeable men in this town whom I have ever encountered over the last quarter century on matters relating to nuclear weapons, proliferation, and arms control. It is an honor to have you here.

I think your report is probably one of the most significant and important reports that has been submitted to this committee in well over a decade. Without any further elaboration, because I want to get to questions and hear your statements, I sincerely hope it is well read in the administration, because I think you are right on target, and I look forward to going into some detail.

Also, Mr. Chairman, we are also fortunate to have as a second panel three very distinguished Americans who have been before

this committee many times, and I appreciate their being here, but we will get to that when we get to them.

So welcome, gentlemen, and thank you very much.

[The prepared statement of Senator Biden follows:]

PREPARED STATEMENT OF SENATOR JOSEPH R. BIDEN, JR.

Mr. Chairman, I have long admired the hard work you, Sam Nunn, and Pete Domenici invested in laying the groundwork for the various U.S. initiatives to help dismantle nuclear weapons and address the "brain drain" problem in the former Soviet Union. This set of cooperative efforts with Russia is probably one of the most cost-effective investments the United States has ever made in helping protect our national security.

Mr. Chairman, we are holding this hearing at a rather opportune moment. I have been greatly alarmed by recent reports that the administration is prepared to propose a full range of spending cuts in the Energy Department's non-proliferation programs in Russia. If these reports are true, they would sharply contradict statements of support during the campaign by President Bush for *increased* funding for the Nunn-Lugar-Domenici programs.

I strongly urge the administration to conduct a thorough review of these programs before choosing to make any cuts. They would be wise to consult the recent findings of the bipartisan task force headed up by Howard Baker and Lloyd Cutler, our first panel of witnesses.

This task force makes a strong case that unsecured nuclear weapons and nuclear-grade material in Russia are the "greatest unmet threat" facing the United States today. The task force concludes that the President, instead of cutting these programs, should be prepared to expand significantly their scope and funding over the next decade in order to secure and account for all nuclear weapons-grade material in Russia.

Hence, I look forward to hearing what Mr. Baker and Mr. Cutler have to say and I also eagerly await the views of our second panel of distinguished witnesses, Ron Lehman and Graham Allison.

Senator LUGAR. I would like to submit for the record a very strong statement submitted by Senator Pete Domenici, our colleague and Chairman of the Energy and Water Subcommittee of the Appropriations Committee. He has much interest in the work of the Commission, and I quote from Senator Domenici. "The report envisions an eight-to-ten-year timeframe, at a cost of $30 billion. In my view, the national security benefits to the United States citizens from securing 80,000 nuclear weapons worth of fissile materials is a good investment. We have a simple choice: We can either spend the money to reduce the threat or spend more money in the future to defend ourselves. I am a strong believer that threat reduction is the first best approach in this case," end of quote from our colleague, Pete Domenici.

[The prepared statement and a news release of Senator Domenici follow:]

PREPARED STATEMENT OF SENATOR PETE V. DOMENICI

Mr. Chairman, I thank you for the opportunity to offer my remarks at today's hearing. As you and today's panelists know, the report under discussion—and the general issue of our cooperative threat reduction efforts—is critically important to U.S. national security. I thank Senator Howard Baker, Mr. Cutler and our other witnesses for taking time out to discuss in detail the report's findings and recommendations.

I would like to begin with a quote from President Bush's address at the Joint Session of Congress earlier this year. He stated:

"As we transform our military, we can discard Cold War relics and reduce our own nuclear forces to reflect today's needs."

I heartily agree with the objective, but I fear I must take issue with the proposed implementation.

We cannot unilaterally downsize our own nuclear arsenal without some assurance that Russia's rebuild capacity is in line with their arms control commitments. Additionally, if we do not adequately address "the most urgent unmet national security threat for the United States today," we should have no confidence that changes to our nuclear posture will account for the potential proliferation hazard of Russian fissile materials and destitute weapons experts.

U.S. nonproliferation goals cannot be achieved through unilateral action. This particular proliferation concern must be addressed through cooperation with Russia. No other option exists.

Allow me to quote also Condoleeza Rice's accurate assessment of the situation:

"American security is threatened less by Russia's strength than by its weakness and incoherence. This suggests immediate attention to the safety and security of Moscow's nuclear forces and stockpile."

Dr. Rice is just one of many reaching a similar conclusion regarding this particular threat. Our witnesses today and their bipartisan commission also concluded that the U.S. response is not commensurate to the threat.

I want to touch on just a few of your recommendations, because I believe these are essential to a sufficient and efficient response. First, the report discusses the dire need for a White House-level nonproliferation czar. Second, you also recommend that the President develop a strategic plan to address the fissile materials and human capital aspect of the proliferation threat. I strongly agree.

We do not have a coherent, integrated agenda. Overlaps and shortfalls exist. A strategic plan should address the scope of each specific problem, identify means to reduce the threat, and offer a concrete time schedule to reach a definite end goal. Further, we have no one person who can view the entire spectrum and identify the gaps, remedy turf battles and bring the necessary coordination to get the job done efficiently and quickly. I and Senator Lugar have repeatedly urged the creation and appointment of a nonproliferation czar and Congress has advanced this issue through legislation.

These are the first two concrete steps toward streamlining and enhancing our efforts with Russia. While I understand that the Bush Administration is formulating a strategic plan, I have not heard any discussion of attaining greater coherence in these programs at the White House level. At the same time, the indication would be that the Administration's strategic plan intends to take an axe to some of the key programs currently involved in addressing the threat.

The cuts proposed amount to a new strategic direction without any involvement of Congress.

The report envisions an 8-10 year time-frame at a cost of $30 billion. In my view, the national security benefits to U.S. citizens from securing 80,000 nuclear weapons worth of fissile materials is a good investment.

We have a very simple choice: we can either spend money to reduce the threat or spend more money in the future to defend ourselves. I am a strong believer that threat reduction is the first-best approach in this case. Inaction will only drive up costs to defend ourselves against unknowables that we could have squelched had we had greater foresight.

I believe this recent report reiterates this point clearly and offers several concrete policy recommendations for tackling this challenge. I look forward to working with the new Administration to ensure that a decade from now we have protected U.S. citizens from this proliferation threat and secured a more peaceful future.

I want to conclude with one additional thought. One of the lessons learned over the past decade of cooperative threat reduction is that efforts in our mutual interest have continued almost without a hiccup regardless of our disagreements with Russia at a different level. In other words, we have avoided linkage between these efforts and other concerns about Russia's activities that we might have at any given time; Russia has done the same. We both have benefitted.

It is not in our national interest to link cooperative threat reduction to any specific disagreement over Russian policy or activities. If we wager these programs due to our discontent in some other arena, we risk the following: Russia will continue to pursue their own security interest, and we will lose the security benefits we reap from these efforts. It's a lose-lose for us.

I thank the members of the panel for being here to testify today. I thank you and all the members involved in writing this report for your prolonged and serious effort in addressing this most fundamental and difficult challenge.

Thank you Mr. Chairman.

[News Release—March 28, 2001]

DOMENICI: U.S. SHOULD NOT ACT UNILATERALLY OR TAKE AXE TO NONPROLIFERATION PROGRAMS WITH RUSSIA

Senator Issues Statement for Foreign Relations Committee Hearing

WASHINGTON, DC.—U.S. Senator Pete Domenici today advised that long-term U.S. security needs would be better served by not acting unilaterally and taking an axe to cooperative nonproliferation programs with Russia.

Domenici addressed the nonproliferation issue in a statement to the Senate Foreign Relations Committee which conducted a hearing on Department of Energy Nonproliferation Programs with Russia. The hearing specifically addressed a recent report issued by former Senator Howard Baker and Lloyd Cutler, co-chairs of the Russia Task Force of the Secretary of Energy Advisory Board.

The Baker-Cutler report recommended the naming of a White House-level "czar" to oversee U.S. nonproliferation programs with Russia, and the development of an overall strategic plan to better coordinate these programs. Both are recommendations long advocated by Domenici, chairman of the Senate Energy and Water Development Appropriations Subcommittee that funds these projects. Overall, the report envisions an eight to 10-year time-frame at a cost of $30 billion.

"These are the first two concrete steps toward streamlining and enhancing our efforts with Russia," Domenici said. "While the Bush administration formulates a strategic plan, I have not heard any discussion of attaining greater coherence in these programs at the White House level. At the same time, the indication would be that the administration's strategic plan intends to take an axe to some of the key programs currently involved in addressing the threat."

Domenici noted that the proposed cuts amount to a new strategic direction without any involvement of Congress. Domenici, chairman of the Senate Budget Committee, will this week introduce the FY2002 budget resolution. While the resolution will keep President Bush's recommendation to provide a 4 percent increase in federal spending, Domenici said Congress may set different priorities for federal investment—including those related to DOE nonproliferation activities.

"In my view, the national security benefits to U.S. citizens from securing 80,000 nuclear weapons worth of fissile materials is a good investment," Domenici said. "We have a very simple choice. We can either spend money to reduce the threat or spend more money in the future to defend ourselves. I am a strong believer that threat reduction is the first and best approach in this case. Inaction will only drive up costs to defend ourselves against unknowables that we could have squelched had we had greater foresight."

"We cannot unilaterally downsize our own nuclear arsenal without some assurance that Russia's capacity to rebuild is in line with their arms control commitments. Additionally, if we do not adequately address 'the most urgent unmet national security threat for the United States today,' we should have no confidence that changes to our nuclear posture will account for the potential proliferation hazard of Russian fissile materials and destitute weapons experts," Domenici said. "U.S. nonproliferation goals cannot be achieved through unilateral action. This particular proliferation concern must be addressed through cooperation with Russia. No other option exists."

Senator LUGAR. I am very privileged at this point to recognize Senator Baker for his testimony.

STATEMENT OF HON. HOWARD H. BAKER, JR., CO-CHAIR, RUSSIA TASK FORCE, SECRETARY OF ENERGY ADVISORY BOARD, FORMER U.S. SENATOR FROM TENNESSEE; BAKER, DONELSON, BEARMAN & CALDWELL, P.C., WASHINGTON, DC

Senator BAKER. Mr. Chairman, thank you very much.

Senator Biden, thank you for permitting me to appear today and testify.

My friend, Lloyd Cutler, and I have worked long and hard on this report. We truly hope it is helpful to the committee, and we hope it is helpful to the administrative and executive department of the Government as well.

I ask unanimous consent, Mr. Chairman, that my 16-page statement be included in the record.

Senator LUGAR. So ordered.

Senator BAKER. In the interest of time, I will try to summarize the major points.

Senator LUGAR. Very good.

Senator BAKER. First of all, in keeping with the tenor of my friend Pete Domenici's statement, I have often said, and will repeat now, that there is a special responsibility in my view on the part of the United States and Russia to deal with this problem, and to do so promptly and effectively.

And that is the problem of controlling and preventing the proliferation of weapons of mass destruction, because after all, Russia and the United States invented the Nuclear Age. It was a result of American research and Russian development that we entered this age of destruction. It has fallen now to be our responsibility to see whether we can survive in that Nuclear Age. We invented it; now we have to see whether we can live in it or not.

The most crucial issue really is how——

Senator LUGAR. Mr. Baker, I apologize for interrupting, but I can tell that they cannot hear you in the back.

Senator BAKER. This is probably one of the few times in my career in this building where people have not been able to hear me.

It is usually the other way around.

I thank you, Senator. Shall I start over?

Senator LUGAR. No. No.

Senator BAKER. OK. But it is a special responsibility, it seems to me, of the United States and Russia to recognize that they are the creators of the Nuclear Age, at least in the development of the Nuclear Age; and, therefore, I think we have a special set of responsibilities to try to minimize the risk to civilization as a result of this great stock and store of nuclear weapons and nuclear material that exists, not only in Russia, but in this country, and other parts of the world.

Russia, as I say in my statement, has over 40,000 nuclear weapons, over 1,000 metric tons of nuclear material, vast quantities of chemical and biological weapons and materials, and thousands of missiles. The cold war arsenal is spread across 11 time zones, but it lacks the infrastructure of the cold war.

My good friend, Bob Strauss—and he is my good friend—was designated by President Bush to be Ambassador to, first, the Soviet Union and then Russia. In the spirit of that friendship and in jest, I wrote him after the dissolution of the Soviet Union and said, "Bob, in my time, I have known a lot of former Ambassadors, but you're the first Ambassador to a former country that I ever knew."

Indeed, that is true. The world has changed. Russia has changed. The balance of power between our countries has changed. The dangers of the Nuclear Age have changed, because we do not now have the discipline, as terrible as it was, of mutually assured destruction, and the discipline that was imposed by only two super powers in the world.

But the materials are still there, and the weapons are still there. And one of the prime questions addressed by this Commission, which I was proud to serve on with Lloyd Cutler, was how well pro-

tected that material is in Russia, how conscious the Russians were of the problems involved, how willing they were to undertake the protective measures that are necessary to see that it is not diverted, that it is not in the hands of other nations, or non-national entities as weapons of mass destruction.

In summary, Mr. Chairman and Senator Biden, I found these things: I found the Russians are aware of the problem. I found, and I believe our Commission agrees, that they lack the resources to deal with the problem efficiently and adequately.

In some cases, the security and storage of nuclear material, and even nuclear weapons, is so primitive that the address by the United States and other powers of the world to try to reduce the risk simply consisted of providing padlocks; in other cases, to provide warm clothing so that sentries could walk their posts, or would walk their posts, in times of excruciating cold winter Russian weather.

There are many, many other aspects of the program that have been undertaken, and there are many branches to our efforts to try to control the proliferation of weapons from Russia and elsewhere.

I commend the Department of Energy, this, and prior Secretaries of Energy, in recognizing this problem. I commend the Congress for creating a unified structure, with General Gordon, to try to oversee this effort. I believe that the Congress is in a position to add materially to the safety of the world by further addressing the question of storage and protection of nuclear material.

We cannot bear the burden alone in this country. It is absolutely essential that other nations of the world recognize that they, too, are at risk, and that they must contribute as well to the improvement of the safety, security, and storage of nuclear material. I believe that can happen, if the United States takes the lead.

It is obvious and equally important that Russia contribute, to the extent of their ability, to the improvement of the security of these weapons, and that they contribute as well to pre-access and transparency, so that we and the world community can know exactly what we are dealing with.

We cannot engage in a program of pouring money into a bottomless bucket. We need to know how many weapons there are, how much material there is. We think we know, but we need to be assured, and the world community needs to be assured that we know what we are dealing with.

But there is an old saying in my state that you cannot do nothing, and while our approach to these problems is perhaps imperfect and, indeed, they are always imperfect, that is not an excuse for inaction.

So it is my hope that this committee, the Congress, will see the urgency in this issue that I see and the committee sees. It is my hope that the administrative and executive departments of the Government will recognize, as we think we recognize, the importance and relevance of an early address to these issues.

This Commission is not trying to substitute our judgment on priorities suspending for the Congress, or for the executive department, but what we are doing is trying to pinpoint the gravity of this risk and to say that time is not on our side, and that we must address it carefully, fully, enthusiastically, and in full cooperation

with the Russian Government, the Russian people, and the community of nations around the world.

I thank you, Mr. Chairman.

Senator LUGAR. Thank you very much, Senator Baker.

[The prepared statement of Senator Baker follows:]

PREPARED STATEMENT OF HOWARD H. BAKER, JR.

Thank you for the opportunity to appear before this committee today to discuss our recent report on the Russian Nonproliferation Programs of the Department of Energy. I recall that I served on this committee for 14 of the 18 years I served in the Senate. It is interesting to observe how much different it seems on this side of the table from where I used to sit. I am pleased to be here with Lloyd Cutler for whom I hold such high regard; we have worked together on many projects over the years and worked closely on this Russian Task Force report. Thank you for your kind words welcoming me to the committee today.

Since the breakup of the Soviet Union, we have been witnessing the dissolution of an empire having over 40,000 nuclear weapons, over a thousand metric tons of nuclear materials, vast quantities of chemical and biological weapons materials, and thousands of missiles. This cold war arsenal is spread across 11 time zones, but lacks the cold war infrastructure that provided the control and financing necessary to assure that chains of command remain intact and nuclear weapons and materials remain securely beyond the reach of terrorists and weapons-proliferating states. This problem is further compounded by the existence of thousands of weapons scientists who, not always having the resources necessary to adequately care for their families, may be tempted to sell their expertise to countries of proliferation concern.

In order to assess the Department of Energy's part of current U.S. efforts to deal with this critical situation, in February, 2000 former Secretary of Energy Bill Richardson asked former White House Counsel Lloyd Cutler and me to co-chair a bipartisan Task Force to review and assess DOE's Nonproliferation Programs in Russia and to make recommendations for their improvement. after nine months of careful examination of current DOE programs and review of related nonproliferation policies and programs of the U.S. Government, the Task Force reached three principal conclusions and formulated one major recommendation.

The most urgent unmet national security threat to the United States today is the danger that weapons of mass destruction or weapons-usable material in Russia could be stolen and sold to terrorists or hostile nation states, and used against American troops abroad or our citizens at home. This threat is a clear and present danger to the international community as well as to American lives and liberties.

Current nonproliferation programs in the Department of Energy, the Department of Defense, and related agencies have achieved impressive results so far, but their limited mandate and funding fall short of what is required to address adequately the threat.

Our Task Force commends current and past Secretaries of Energy and General Gordon, the new Administrator of the National Nuclear Security Administration, for their dedication, commitment and hard work in seeking to address this issue. The cooperation of the Russian Federation has also been a critical and significant factor in the work carried out to date.

However, our Task Force concludes that the current budget levels are inadequate and the current management of our Government's response is too diffuse. The Task Force believes that the existing scope and management of the U.S. programs addressing this threat leave an unacceptable risk of failure and the potential for catastrophic consequences.

President Bush and the leaders of the Congress face the urgent foreign policy challenge of devising an enhanced national security program proportionate to the threat.

An enhanced national security response should include: a net assessment of the threat; a statement of a clear, achievable mission; the development of a strategy with specific goals and measurable objectives; a more centralized command of the financial and human resources required to do the job; and an identification of criteria for measuring the benefits for Russia, the United States, and the entire world.

Our Task Force offers one major recommendation to the President and the Congress. The President, in consultation with Congress and in cooperation with the Russian Federation, should quickly formulate a strategic plan to secure and/or neutralize in the next 8 to 10 years all nuclear weapons-usable material located in Russia and to prevent the outflow from Russia of scientific expertise that could be used for nuclear or other weapons of mass destruction. Accomplishment of this task will

be regarded by future generations as one of the greatest contributions that the United States and Russia can make to their own long-term security and that of the entire world.

While emphasizing that enhanced efforts are needed from the U.S., the Task Force underscores that enhanced efforts are also required from Russia. Ultimately, Russia will be responsible for securing its remaining nuclear arsenal. If this program is conceived in full cooperation with the Russian Federation, is adequately financed, and is implemented as part of a growing, open and transparent partnership, the Task Force believes that Russia should be ready to take over any remaining work at the end of the 8 to 10 year period. If the Russian Government is not prepared for such a partnership, then we believe full success will not be achieved.

Bearing this in mind, the Task Force report outlines a suggested national security program to secure and/or neutralize all nuclear weapons-usable material located in Russia and to prevent the outflow from Russia of scientific expertise that could be used for nuclear or other weapons of mass destruction. We believe this program could be carried out for less than 1 percent of the U.S. defense budget, (approximately up to $30 billion over the next 8 to 10 years. The Russian Government would, of course, be expected to make a significant contribution commensurate with its own financial ability. The national security benefits to U.S. citizens from securing and eliminating the equivalent of more than 80,000 nuclear weapons and potential nuclear weapons would constitute the highest return on investment in any current U.S. national security and defense program. President Bush should press other major powers such as the European Union, Japan and Canada to assume a fair share of the costs of these efforts that will enhance the security of these countries as much as that of the U.S. and Russia. Contributions from other countries could significantly reduce U.S. costs.

ASSESSING CURRENT DOE NONPROLIFERATION PROGRAMS

The Task Force had the benefit of briefings by both government and non-government experts and reviews of written materials. Members of the Task Force also visited seven sites in Russia in July 2000, reviewing DOE programs and meeting with 13 organizations over the course of a week. Its members were able to visit only a few sites of the vast nuclear complex. those sites may have been in better economic and physical condition than others in the complex. Nonetheless, the dire state of those sites visited was cause for grave concern.

The Task Force applauds the accomplishments of the current DOE programs and the related programs of other U.S. Government agencies. The Task Force in particular commends the dedication to duty exhibited by the hundreds of DOE and national lab employees involved in these programs. The Task Force was also impressed by the high quality of cooperation demonstrated by most of DOE's Russian counterparts during the course of its visit to Russia. Both Minatom and the Russian Navy provided access to all of the facilities requested, in some cases showing Task Force members sites that they had not expected to be allowed to visit. Despite difficulties that have emerged in the overall implementation of the DOE programs, the Task Force found Russia's cooperation to be a significant and positive factor. The United States and Soviet Union competed in creating the nuclear age; now the U.S. and Russia are cooperating to dismantle it. The Task Force believes that it is far better for the United States to be on the inside working together with Russia than on the outside with no capability to affect Russia's actions.

However, the Task Force finds very disturbing the ongoing Russian trade with Iran in dual-use nuclear technology and missile technology and Russia's apparent intention to supply new conventional weapons systems to Iran. Despite the fact that these issues have been raised with Russia at the highest levels of both governments, the problem has not yet been resolved. The Task Force views the failure to resolve these issues as very serious and believes the lack of satisfactory resolution will increase the difficulties inherent in continued cooperation with Russia and in carrying out the Task Force's recommendations. While the Task Force affirms that the DOE nonproliferation programs are unequivocally in the U.S. national security interest, the Task Force is particularly concerned that if Russian cooperation with Iran continues in a way that compromises nuclear nonproliferation norms, it will inevitably have a major adverse effect on continued cooperation in a wide range of other ongoing nonproliferation programs. Among other consequences, there will be little support in Congress and the Executive Branch for the major new initiatives the Task Force is recommending.

Unquestionably, much has been accomplished by the array of programs now being operated by DOE and other U.S. Government agencies. Nonetheless, the Task Force believes it is time for the U.S. Government to perform a risk assessment based on

input from all relevant agencies to estimate the total magnitude of the threat posed to U.S. national security. The Task Force also believes there is a strong need to create greater synergies among the existing nonproliferation programs, hence its call for government-wide coordination of the current programs and direct White House involvement.

THE TASK FORCE SPECIFICALLY FINDS . . .

By and large, current DOE programs are having a significant and positive effect. The strategic plan recommended by the Task Force should review the needs of each of these programs and, where appropriate, provide for a substantial increase in funding. Expansions of program scope and increases in funding, however, must take careful account of the pace at which funds can usefully be expended in each individual program.

The strategic plan and the associated budgets should identify specific goals and measurable objectives for each program, as well as provide criteria for success and an exit strategy. These should be factored into the 5-year budget plan currently being developed for the National Nuclear Security Administration.

A major obstacle to further expansion and success of current programs is the continuation of differences between the U.S. and Russia over transparency and access. As a condition for a substantially expanded program, the U.S. and Russia should agree at a high level on what degree of transparency is needed to assure that U.S.-funded activity has measurable impacts on the program objectives and that U.S. taxpayer dollars are being spent as intended.

Given the gravity of the existing situation and the nature of the challenge before us, it is imperative that the President establish a high-level leadership position in the White House with responsibility for policy and budget coordination for threat reduction and nonproliferation programs across the U.S. Government. The President should appoint a person of stature who commands the respect and attention of relevant cabinet officers and congressional leaders to lead this program.

The U.S. administration of these programs should seek to eliminate any unnecessary and overly restrictive controls that hamper swift and efficient action. To overcome potential bureaucratic impediments that often arise from "business as usual" practices within the Russian and U.S. bureaucracies, DOE and related agencies should take practical steps, including further enlargement of the DOE team working with the U.S. Ambassador in Moscow, to ensure the most efficient on-the-ground implementation of the programs in Russia.

It is imperative to mobilize the sustained interest and concern of the Congress. The Task Force urges the Congress to consider the creation of a joint committee on weapons of mass destruction, nuclear safety and nonproliferation, modeled after the former Joint Committee on Atomic Energy. Creation of such a committee would ensure that the issues receive adequate high-level attention and that Member and staff expertise is developed and preserved.

Thank you again for the opportunity to speak with you today on this very important matter.

Senator LUGAR. Mr. Cutler, you have testimony for us.

STATEMENT OF HON. LLOYD N. CUTLER, CO-CHAIR, RUSSIA TASK FORCE, SECRETARY OF ENERGY ADVISORY BOARD, FORMER WHITE HOUSE COUNSEL; WILMER, CUTLER & PICKERING, WASHINGTON, DC

Mr. CUTLER. Senator Lugar, I am very pleased to be here.

We were a unanimous commission, and a non-partisan commission, and Senator Baker's statement is essentially my statement. I agree 100 percent with it.

You have noticed, and I believe you have already mentioned, that the Commission included, in addition to Senator Baker, several of your other former colleagues, including Alan Simpson, Sam Nunn, and Jim McClure.

I think the best way to move forward would be simply to say that I was delighted to work again with Howard Baker. I think Japan is very fortunate to receive as our Ambassador one of the true citizen statesmen of our time, and a person who, unfortunately, will

no longer be able to concentrate on this problem, except perhaps to persuade the Japanese to contribute their fair share.

Senator LUGAR. A very good suggestion.

Mr. CUTLER. Thank you, sir.

Senator LUGAR. Let me commence the question period for our witnesses.

First of all, I appreciate your outline, Senator Baker, of the tasks ahead of us, and the fact that we must do something, and we must do it effectively.

Essentially, some time ago, just after the breakup of the Soviet Union, former Senator Sam Nunn and I offered legislation to assist in the elimination of weapons of mass destruction in the former Soviet Union. Senator Biden was a part of a bipartisan group that came together to support our effort that came to be known as the Nunn-Lugar Act.

Our efforts where augmented by Senator Domenici's efforts with programs at the Department of Energy. His efforts were crucial, in providing security for thousands of tons of weapons materials in which security was either non-existent or very difficult despite tremendous progress much remains to be done.

It has been my experience, even as recently as December of last year, when I visited weapons and material storage sites in Russia, that there are severe security problems, which require our attention.

One of the criticisms put forth by some is the thought that money is fungible. In other words, clearly, there are security problems for the Russians. They acknowledge that. The Russians understand their citizens are at risk from proliferation of these materials, whether they are nuclear, or chemical, or biological.

I believe the moneys we have spent to hire American contractors to do this important work in the former Soviet Union, through the Pentagon or Departments of Energy or State, have been well accounted for, and have accomplished a lot.

But can you offer some advice as to how we might respond to these arguments when we visit with our colleagues in the Senate and the House? If we were to spend substantially more money to secure these materials from leaking out of Russia to other countries, or worse, to rogue states what should we say with regard to the fungibility argument?

We are in a position to make a difference, but at the same time, some would say, "Not a penny more for this, because you simply are aiding and abetting modernization of weapons, sometimes weapons of mass destruction in newer forms."

Senator BAKER. Well, let me try to answer, if I may, Mr. Chairman. I said earlier on in my remarks that the only thing we cannot do is nothing.

While there are all sorts of arguments about why our programs are not totally cost-efficient in Russia, while it may be essentially unfair that we bear such a disproportionate share of the financial burden, while it may be true that in some cases they are of questionable efficiency, it is also true that if we do not do it, no one will, not even the Russians, partly because they do not have the resources, and partly they do not have, I think, the same sense of danger that we have.

If I were arguing this matter on the floor of the Senate of the United States on a matter of appropriations, I would simply say that there are not any issues of national defense that are more important, in my view, short of ultimate survival of the nation, than seeing that we reduce the threat of proliferation. And the greatest threat of proliferation is not the development of new sources, but the protection and safeguarding of existing sources of nuclear material.

I think we also would argue that we have to have a program well developed and executed in order to argue convincingly to other nations that they have a stake in this process, and that there needs to be further effort to engage other nations in not only the financing of these programs, but in their execution.

I would like to see other European or Asian nations involved in visits to Russia to see for themselves what we are talking about.

I guess if I were on the floor of the Senate of the United States—and I have not been there for a long time—I would make it clear that I am not trying to challenge the financial priorities of the administration, but rather pointing out that this is a competitor of great importance for available resources, and acknowledge that the Congress, with cooperation of the executive department, must order those priorities, but then try to underscore that there are few priorities on national defense that are more important than the avoidance of a nuclear catastrophe.

I probably would take longer time than the Chair would grant to me under the circumstances, but that is probably what I would say.

Senator LUGAR. Senator Biden, I would ask for extended time.

Senator BIDEN. Oh, please. Go ahead.

Senator LUGAR. I will ask one more question.

Senator BIDEN. No. Take your time.

Senator LUGAR. Let me say that the Task Force recommended a higher level leadership position in the White House responsible for nonproliferation programs and policy.

In 1996, the Nunn-Lugar-Domenici legislation called for a nonproliferation coordinator at the White House. There was great resistance among the bureaucracies involved, quite apart from the National Security Council and so forth.

Now, they have begun to move in that direction. I will not try to outline the whole process, but I think that you have highlighted very well in your report the need to properly coordinate the efforts of multiple agencies on what is considered the number one threat facing our country. This is a very, very vital mission, we can't afford overlaps and gaps in our efforts.

At some point, the President probably is best served if there is somebody close by who tries to inform him of all that is being done and what type of leadership structure is necessary. But can you outline this a bit more, because I think it is such an important part of our response to these threats?

Senator BAKER. I can, Mr. Chairman. Let me first say that I am a graduate of the old Joint Committee on Atomic Energy in the Congress, and to say parenthetically that I thought the whole nuclear program in Defense, and then in civilian purposes, lost focus after the Joint Committee on Atomic Energy was disbanded.

But in that same vein, I do think that there needs to be a unifying theme, not only in Congress, but also at the White House, and throughout the executive department.

I have had the privilege of serving here and also serving a President at the White House, and I can say firsthand from my experience that unless somebody focuses on a particular issue with energy and enthusiasm, it tends to get lost in the shadows.

And I will repeat, I guess, for the third time now, I do not think there is any issue really that is more important than making sure we do not annihilate ourselves in a nuclear accident of some sort.

So I would favor, and this report, indeed, recommends that there be a coordinating person of high rank who would have the ear of the President and have the respect of the Cabinet and other agencies of government in seeing that this issue does not get lost in the shadows, and that it remains in the forefront of the concern of the President and the White House.

Senator LUGAR. Did you take testimony during your hearings or deliberations from American officials who are involved in these programs or from Russians with who we cooperate? Can you outline some of the sources of information that you utilized?

Mr. CUTLER. We did, Senator Lugar. We interviewed all of the officials of the DOE who were conducting various programs. We heard from all the NGO's who were interested in the problem of weapons of mass destruction, including nuclear weapons.

We made an extended trip to Russia, involving about ten to twelve members of our Commission, and we split up into three or four task forces within Russia, visiting some of the nuclear cities, visiting the submarine bases, where the old nuclear-powered submarines are being dismantled. We went to the Kurchatov Institute, right outside of Moscow, and I think we heard from everybody.

I think it is very important to remember, though, in connection with your question about someone in the White House giving serious attention to this problem, that there are turf wars within the U.S. Government, and within the U.S. bureaucracies, that need attention just as much as the many problems that are on our agenda with the Russian Government at this time.

And what we need, we think it is trite to say, but like a drug enforcement czar—we did not use the word "czar." We do not even say who it should be, but to give you a prototype, if we had a Senator Baker, someone with his gravitas in the White House concentrating on this program, it would be of enormous benefit.

Senator BAKER. Mr. Chairman, every President is entitled to choose his own organizational structure within the guidelines of the statute of the Constitution, but I do not—I totally agree with what Lloyd Cutler has said, and I commend it to this President and the administration, that there be an enhanced focus on this issue, that there be an enhanced organizational structure to see that it remains utmost in the scheme of concerns for our national security.

Maybe it should be a portfolio of the chairman of the NSC. The chairman of the NSC has a hundred other things competing for his or her attention.

I do think that there needs to be one person whose portfolio is exclusively this concern, and that may be an existing officer in the

White House, an existing position, but it ought to be clearly recognized—it ought to be respected throughout the government, and recognized as the program of the President of the United States.

Senator LUGAR. This concern—I think you are defining it as really a concern about the leftovers of the cold war. But you define it as "the existing threat," as opposed to all of the other threats. This is, in fact, the most important threat that our security has.

Senator BAKER. Could I add one other point to that, Mr. Chairman? I do not mean to be unduly philosophical or psychological about it, but it really boggles my mind that there could be 40,000 nuclear weapons, or maybe 80,000 in the former Soviet Union, poorly controlled and poorly stored, and that the world is not in a near state of hysteria about the danger, but it is a function of the human mind that after you live with something for a while, you sort of get used to it.

I guess if we have a single purpose for our Commission, Mr. Chairman, it is to refocus public attention and governmental attention on the enormity of this danger. And the fact that we have not blown ourselves up so far is no guarantee that we could not still; or that some rogue nation or rogue group has not yet successfully stolen a nuclear weapon does not mean that they cannot still do it if all you have is a padlock out there.

So there ought to be a tight focus within the administrative department. There ought to be broad-based, bipartisan support from the Congress to do what needs to be done, including to fund these programs.

There ought to be a public reawakening of the danger involved, not panic, but a reawakening of the danger. There ought to be a call for cooperation by other nations of the world. It should not be exclusively our responsibility, although, as I say, we and Russia invented the Nuclear Age, so we have a special responsibility.

We ought to make sure that this is carefully coordinated, and I think it falls to the lot of the United States, as it often does, to see that all of that happens.

Senator LUGAR. Well, I appreciate your testimony very much. You know my personal enthusiasm for all that you are saying. I would like to express my appreciation to Senator Helms for asking me to chair this hearing, so that we could hear that testimony, and underline the importance of this Commission.

Senator BAKER. Thank you, sir.

Senator LUGAR. Before turning to Senator Biden, I would note we have received a press report from Russian sources that Mr. Adamov has been fired from his position as Minister of Atomic Energy. The executive director of the Kurchatov Institute, that you visited with during your research, will be the new director. So there are changes underway as we speak.

Senator Biden.

Senator BIDEN. I am going to yield in 10 seconds to my friend from Massachusetts, because he is chairing another hearing, and he wants 2 minutes.

But I do not think we should go any further without stating that we would not be where we are today if it were not for Senator Lugar. The fact of the matter is, he—and Sam Nunn before him—he has been carrying the ball here. And in his low-key way, he has

been the master of the facts and the details and is the reason why what we have gotten done has been done. His pitch is so compelling.

So I just want the record to note that and I do not want to turn this into a mutual admiration society here, but I really mean it Senator Lugar's nonproliferation initiative has been the single most significant contribution that I think any Member has made to the Congress in the last half-dozen years.

I hope that with the help of the two of us here, and others on his side, we can give him some additional support to raise the profile of this issue.

This is one issue that I find, when you sit down and talk with anyone, from the most sophisticated to the most unsophisticated American, they get it; they get it. And what I worry about, I say to my colleagues, is this mind set that we are in now, where we needlessly escalate the rhetoric on things where there is genuine disagreement with Russia. We have serious disagreements with Russia.

I have serious concerns about Putin, we all do, but my mother has an expression, and I am sure your mother from Tennessee has one as well, which is, "Do not bite your nose off, Joey, to spite your face."

This is a case where, if we are not careful, we may be biting our nose off to spite our face, if we do not follow the lead of Senator Lugar and this Commission.

With your permission, I will yield to Senator Kerry.

Senator BAKER. With your permission, can I say a word about Dick Lugar?

Senator Lugar and I have been friends for a long time. We have done a lot of things together, but I would simply add to what Senator Biden said. This Commission probably would not exist, our concern for this problem probably would not be visible on the landscape, and certainly the programs which are in place now would not have been created were it not for Senator Lugar and Senator Nunn.

They have made an enormous contribution to the safety and security of this country. We simply must not fail to give credit where credit is due.

Senator LUGAR. Thank you.

Senator Kerry.

Senator KERRY. Mr. Chairman, thank you very much, and I thank my colleague from Delaware. I will be very brief, because I am chairing another hearing, and I need to get back to it, but I did not want to let that prevent me from coming here to underscore the importance of this.

And let me just share, Mr. Chairman, the thoughts already expressed. You have been extraordinary on this. You led the Senate, together with Sam Nunn, in helping us to recognize that the chemical, biological, and nuclear weapons of the former Soviet Union were perhaps the goldmine for potential terrorists, and for would-be proliferators.

It is almost extraordinary to me, because we went through that period when arms control was on the front burner for such a long

period of time, and here we are today with really not that kind of focus, and it is quite extraordinary.

What is equally extraordinary is that at least as of this moment, the Bush administration not only has no intention of revitalizing the support for these programs, but have indicated there may be proposed cuts in the non-proliferation programs for fiscal year 2002.

Now, this is absolutely stunning to me. I am sure it is stunning to you, and unacceptable, and I hope that in the next days wise heads will prevail, and wise men and women will weigh in in a way that will change that.

I thank both of you so much for your contribution to this dialog and to this effort in putting this report together, and evaluating the non-proliferation programs. I wanted to just leave a few questions on the table, if I may, to be answered perhaps at a later time, but as part of this record.

With respect to the Russian plutonium disposition program, in September of last year we agreed with Russia to dispose of 34 metric tons of excess weapons plutonium, and we have appropriated $200 million for the program to test and demonstrate disposition technologies, but disposing of that plutonium is estimated to cost about $2.1 billion.

And to make up the difference, we have been working with our allies in the European community to get them to shoulder some of the burden, and that has been somewhat successful, but we still need to figure out how we are going to deal with this in the long run.

We have leveraged commercial interests in the nuclear fuel market to try to address the highly enriched uranium. And under a 1994 agreement, we are authorized to purchase 500 metric tons of nuclear weapons converted to low enriched uranium suitable for commercial purposes. There is some struggle between your report and Russia disagreeing over the economic value of plutonium, and that has precluded a similar arrangement with respect to plutonium.

So I would simply want to ask if in this record at some point, Mr. Chairman, we could address a series of questions: "What is the disagreement over it? What are the major challenges to developing a commercial approach for plutonium disposition? What will be the impact for non-proliferation if we do not develop a funded, workable plan for the HEU and plutonium? And will not that problem simply get more exacerbated as the unilateral reduction takes place, and it is not in place?"

So, again, I thank you for the work on this, which is really so critical, and I wish the entire Congress would—I mean we have spent billions, if not trillions of dollars, building all of these weapons, facing up to this extraordinary threat. And the fact is, the threat is really, while less, not that much less in its current form, and we need to pay attention to it equally.

So, Mr. Chairman, thank you very much.

Senator LUGAR. Thank you, Senator Kerry.

Senator KERRY. And I thank my colleague for letting me leave those questions on the table. I apologize for having to move to a different hearing.

Senator LUGAR. Thank you.

I recognize now Senator Biden.

Senator BIDEN. Gentlemen, in response to Senator Lugar's question about "How do we make the case for the urgency and the danger." I want to raise an idea with you and see what you both think. We have, understandably, a generic and increasing preoccupation among hawk, dove, and everybody in between, about weapons of mass destruction, but the focus of the debate seems to be moving toward rogue states obtaining weapons of mass destruction .

National missile defense, and the rationale for it, is against rogue nations emerging with a long-range missiles capability that can, at a minimum, carry a biological or a chemical weapon, and possibly a heavier nuclear weapon.

I think we can begin with the leadership of Senators Domenici and Lugar on the Republican side, and a couple of us on the Democratic side, to try to get this less a partisan "who-is-doing-what-to-whom," and "why is this administration cutting," and so on and so forth, and instead talk about it in an overall context of the threat of weapons of mass destruction and the likely vehicles for delivery of those weapons, and where the capacity to construct them and to launch them exists, whether it is on the head of a missile, or in the hull of a freighter coming into the San Francisco Harbor. If we do that, I think we might be able to focus press and public attention in a way that we are not able to do now.

Right now, there are basically four programs that have been put in place: for securing excess plutonium; for securing excess Russian HEU; for improving security in accounting for other nuclear materials in Russia, and for downsizing and restructuring Russia's excess nuclear complex. And also one that you have added in your summary and in your outline of proposed spending for insuring transparency in Russia and verifiability of the programs.

All these programs relate, do they not, to the idea of constraining and limiting the possibility that a weapon or weapons of mass destruction will get in the hands of someone, an individual group or a nation-state, that does not have the capacity now.

Is there any fundamental difference between what you are attempting to do relative to weapons of mass destruction and what we are attempting to do with the national missile defense, in terms of combating weapons of mass destruction, in terms of the objective?

Obviously, the means are very different. Am I off in that? Am I comparing apples and oranges here, or is the end-purpose of each of these proposals, yours here, and a national missile defense, basically the same? Is the objective the same, which is to diminish the possibility that America, or the world for that matter, but America in particular, will be either held hostage to and/or subject to being held hostage, or open to an attack by a weapon of mass destruction?

I do not believe this is a case of either/or, by the way. I am not playing a game with you, Mr. Leader, that is, "Well, if you are for this, you are against national missile defense." I am not suggesting that. I am just trying to get a construct here.

Senator BAKER. I accept that, Senator Biden, and I appreciate the question. It is a penetrating and important question, and the objectives are the same.

They are survival. The point of departure is different. That is, are you going to try to interdict the weapons material or weapons before they are diverted, or are you going to try to catch them after they are launched?

In an earlier time in my career, in an earlier time in my life, I would quickly engage in a conversation about that, but I must ask your forbearance. This testimony today is based on work that was completed before the President issued his notice of intention to nominate me as Ambassador to Japan——

Senator BIDEN. Fair enough.

Senator BAKER [continuing]. And I decided in my own mind that the appropriate thing to do would be to go forward and complete this work with Lloyd Cutler, and to testify about this report. But I respectfully request that I may be excused from commenting on——

Senator BIDEN. Fair enough.

Senator BAKER [continuing]. Other items that have to do with policy.

Senator BIDEN. Maybe Mr. Cutler would be willing to——

Mr. CUTLER. Senator Biden, I am not subject to that same restraint.

It is true——

Senator BIDEN. I wish you were, because I wish you were actively——

Mr. CUTLER. I have survived this long without ever having been confirmed, but it certainly is true that there is a spectrum of weapons of mass destruction that have to be dealt with. And we have to ask ourselves: Are our present programs well designed to meet those threats, just as you outlined them across the board?

One of the most important points of a hearing like this, I think, is to encourage the education of the public. The average voter or the average citizen today is perhaps 40 or 45 years old. He or she knows nothing about nuclear terror, about the bomb shelters we all built for ourselves, about the cases of tuna fish, about the exercises in the school room where you would train to hide under your desk with a piece of linoleum over your head, as if that was going to make any difference.

The public needs to be reawakened without being panicked, as Senator Baker said, about the spectrum of threats, and it needs to have the benefit of films like "Thirteen Days," and hearings like this. I wish there was some way of getting our report into the Congressional Record or someplace where it might actually be read or videoed in some way.

Senator BIDEN. Well, I assure you, we will get it in the "Congressional Record."

Mr. CUTLER. That will not necessarily increase the circulation, but I thank you for the offer.

Senator BIDEN. Well, again, and I will yield after this, because we unfortunately have additional colleagues here who wish to speak, and I know you have to leave, Mr. Cutler, at 11:00.

But your report lays out a fairly ambitious blueprint for a national strategy to account for and secure all the remaining nuclear-grade material in Russia over the next decade.

You have implied, if not said directly—and I am not sure which it is, Mr. Leader—that you think that, for whatever reasons, the Russians are prepared to follow through on this for their own reasons, that there is not, at this point, a significant resistance to us, quote, "trying to help them with their problem," which is also our problem.

The report proposes, over 10 years, a comprehensive program that costs roughly $30 billion, about $3 billion a year. I do not know how it gets parsed out exactly, but——

Senator LUGAR. That is 8 years.

Senator BIDEN. Eight years? So it is a little more than $3 billion a year then, if we were to implement it. The report highlights that this $30 billion is roughly 1 percent of what we expect to spend over the same period of time on national defense.

Quite frankly, I think it is going to be less than 1 percent if we spend it, because I predict we are going to be in a position over the next several years where the national defense budget is going to be well in excess of $300 billion. But for what it is worth, that is my opinion.

It is a reasonable amount of money, but as pointed out by the chairman, there is a counter-intuitive instinct on the floor, which I do not quite get, which is that even if it does help us, if it helps them, we do not want to do it.

Now, again, some of it literally is that knee-jerk. Some of it is more nuanced and says, "It is fungible money. It means, now, that will enable them to spend time transferring weapons to Iran," et cetera, but the essence of it is, "Why should we help those guys? They are still bad guys."

I think that my friend is correct, that as strange as it may sound, if someone were to read this record 25 years from now, we are going to have a hard time with this. This is going to be a hard deal to sell, and it should be the single easiest sell, to spend money on this up here.

I mean if we can spend $30 billion on a crime bill over a period of 8 years, we sure should be able to do this.

Now, here is my question. I think we are going to be faced with a question of priorities. We are not going to get all that we think we should get, but I completely concur with your report, completely concur. And I want to make the point, and I assume our second panel will point this out, that you make some constructive criticism about these programs and this report is not all Pollyannaish. It is not like, "Everything is going great. This is a wonderful deal. We have no mistakes. There is no place we have to tighten up." You make constructive criticisms about the existing programs I have mentioned, and ways in which you would like to screw them down and tighten them up.

But we are going to be faced, I suspect, with the requirement of having to pick and choose here, because we are not going to get all the money we want. I hope that is wrong, but that is my guess.

If you want to kick this back to the next panel in the interest of time, I understand but among the nearly 20 specific proposals

that your Task Force has made for inclusion in this broad strategic plan, are there any that are of considerably higher priority in the near-term, perhaps because change is taking place so rapidly, that if we do not grab it now, we lose it?

Is there any prioritization within your recommendations? What if I said to you, "OK, fellows, you are not going to get $3 billion this year." Hopefully we are going to convince the administration to restore what they are cutting. I think we have to cut this administration, like every administration, some slack here. They are brand new. They are just getting into this. And they are very qualified people, I do not mean to imply that they are not.

But I have observed, Mr. Leader, that every time we get a Governor who is a President—they get elected more than Senators do, as you and I both know.

But they are usually not very surefooted, the first several months after they get here, on foreign policy and defense matters.

So I am hopeful. I think that this administration can be talked to and may be willing to alter their initial policies.

But if you are willing, or if you would rather think about it and supply it for the record, how would you prioritize if we came back and said, "We are only going to be able to get a total of $1 billion this year for your initiatives"? Is there any priority within your recommendations, or among them?

Senator BAKER. Senator Biden, in the report we do not attempt to prioritize. And frankly, the one reason—I guess the reason is because that really is Congress' job sort of to do, and we are going to respect—obviously going to respect what you decide.

I have a personal priority. I have not expressed it in the report, but I will express it now. I am a little short of terrified at some of the storage facilities for nuclear material and nuclear weapons; and relatively small investments can yield enormous improvements in storage and security. So from my standpoint, that is my first priority.

Senator BIDEN. An adjunct to that, if I may: Are the Russians, in your view, susceptible not only to continuing this cooperation, but to us targeting the cooperation?

In other words, are they susceptible to us saying, "OK, we are not going to be able to get all that is needed, but we are going to come up with *x* amount of dollars, but you must use it for security as opposed to something you think is higher priority"?

How likely if you could for the record, is that to work?

Senator BAKER. Well, I think it is likely to work, because I think they are very anxious to address this problem. There is resistance within the Russian structure to doing anything, just like there is in the United States to doing anything.

Could I take just a minute to give you an example?

Senator BIDEN. Please.

Senator BAKER. I have had the privilege of visiting Murmansk, the Northern Fleet base, and to see submarines tied up that were obviously not working, and to go into storage facilities that were barely—and to see flag-rank Russian officers humiliated when they said, "We have to have your help. We know what to do, but we have to have your help."

I sat there, in a great, long command car, with all this braid next to me, thinking, you know, "How this must rankle with him, to hold his hand out to the United States for money and assistance," but based on that experience and others, I think they have crossed that threshold.

I think they are willing to do what has to be done, and I think they are willing to let us decide the priorities, within reason. I hope that is right. I think that is right.

Senator BIDEN. I will close with this, and yield to my friend from Florida, who, I might add selfishly, since it is always nice to have new members on the committee, is particularly nice to have on the committee because he is so knowledgeable. This is a fellow who as has been the case in our additions on the Republican side, is a serious member on this committee.

But let me conclude by just citing a couple of statistics that you know well, but I want to mention just for the press to understand. The finding in the nuclear cities, I will not go into the program now, it is that more than 62 percent of the employees in these nuclear cities and I remind everyone that the Soviets literally built entire complexes and cities with thousands of people that were devoted to one and only one thing, and that is producing weapons and/or material for weapons of mass destruction, earn less than $50 per month.

These are our equivalent, many of them, of our Ph.D. nuclear physicists. These are equivalents of the people who work at the laboratories out in New Mexico, whether they are washing test tubes, or they are the top scientists, 58 percent of the experts are forced to take a second job to earn money; 14 percent state they would like to work outside of Russia; and 6 percent express an interest in moving, quote, "anyplace at all to work."

Now, we were pretty smart after World War II. We went into Germany, and everybody who had a capability to deal with serious weapons programs, we took, if we could. What makes us think that that same instinct does not exist in Iran, Iraq, North Korea, and other countries as well?

By the way, Russian missile enterprises report the same thing, 28 percent of their experts are forced to take a second job; 25 percent said they would like to immigrate to another country; 21 percent said they would work in a military complex in any other country they could get a job.

I yield. I thank my colleague.

Senator LUGAR. Thank you, Senator Biden.

I want to recognize Senator Nelson.

And I also want to recognize that it is 11 o'clock, and we appreciate very much your being with us, Mr. Cutler. I understand, because you will be at the funeral for Roland Evans, our dear friend, the need for you to leave at this point. But we thank you very much for testifying for your leadership.

Mr. CUTLER. Thank you. And if I can deliver that last message to Mrs. Evans, I will.

Senator LUGAR. I wish that you would on behalf of all of us. We knew Roland very well. Thank you.

Senator Nelson.

Senator NELSON. Thank you, Mr. Chairman. In your executive summary there are three underlined sentences, the first of which is—and I will just take parts out—that weapons-useable material in Russia could be stolen or sold to terrorists or hostile nation-states.

Mr. Chairman, the other day I took off down to Oak Ridge. I had never been there. I had wanted to, as a member of this committee, and as a new member of the Armed Services Committee, to have an appreciation for it. By the way, they need a lot of new facilities down there. They are still operating in World War II buildings.

But the briefer said something very interesting. He said, "We have very strict controls on all of the enriched uranium here, and sometimes we cannot account for all of it."

If they cannot account for that under strict controls, what must it be like in Russia? I would like your comments, Senator Baker.

Senator BAKER. Senator, that is a very good question. As a matter of fact, Oak Ridge, as you know, is in my home state of Tennessee, and I grew up with it. My dad was a Member of Congress when it was built.

The inventory or accounting for uranium, enriched uranium, is a difficult job, because it goes through a process, and some of it stays behind, and not just in Oak Ridge, but for a long time there was a great concern that we had lost a significant amount of nuclear material in a little place called Apollo, Pennsylvania, and they finally messed around with it and decided, "Well, maybe it was still in the barrier pipes, and maybe not. Maybe it went someplace else," but it is not easy.

In this country, we are talking about grams and micrograms of material. In Russia, I am talking about kilograms of material. I am talking about finished weapons that are barely protected. I am talking about doors that have an ordinary padlock on them, and sometimes not even that. The principle is the same, but the order of magnitude is vastly different.

I must say that, if I could, on your time, Senator, the remark made about nuclear scientists, the nuclear cities, I think in a way is as important as the protection of nuclear material. It is clear that a number of talented scientists have already migrated to other countries, are already engaged in the development of material that can lead to weapons of mass destruction. That is a more difficult problem than finding padlocks that will hold a door closed. I do not know what we can do about it.

Of all the programs we have, maybe the nuclear cities program is the least successful, but it is because the problem is so diffuse, and there is really not an easy answer for it.

In Oak Ridge, to use your example, I remember when the Federal Government sold the facilities, the houses and what not, and kept the manufacturing facilities, and the transition to a peaceful settlement was complete, thorough, and successful.

But you cannot do that in Russia, because there is still an overlay of the old Soviet hierarchy. There are still people there that have no place to go. There is still a reluctance on the part of industry or private enterprise in Russia, or anyplace else in the world, to going behind those locked doors and barbed wire fence.

Conserving the intellectual resources in this field, protecting it, keeping it out of hostile hands, is at least as difficult, perhaps more difficult, than protecting nuclear material and nuclear weapons.

I have no answer for you, sir. I am sorry I do not. But I am glad you went to Oak Ridge. We will invite you back.

Senator NELSON. It was a good lesson.

Now, when the old Soviet Union started to break apart, instinctively, since I had some knowledge of the space program, and some knowledge of the Soviet space program, the direction that we were heading, regarding the cooperation with the Soviets was a correct one. And it has certainly borne out, I think, to be a policy that is in the interest of the United States, where we are cooperating. Indeed, we are building a space station together right now, as we speak.

But how many more of these things—so that admiral that you were talking about, that is perhaps being seduced by some terrorist organization, or that scientist, or that engineer, that we could have cooperative programs with them, which helping them is clearly in the interest of the United States.

Final question: We have to make a decision. I am on another committee that I was fortunate to be appointed to, which is the Budget Committee. We are going to mark up a budget next week.

Senator LUGAR. I would not consider that good fortune, but that is another——

Senator NELSON. Well, I have members who still have not forgiven me. If we could ever get out of our partisanship streak and start to strike a budget that is in the best interest in a bipartisan way—we are not even going to have a markup in the committee, because the chairman is refusing.

But be that as it may, I have to deal from the deck of the cards that I have been delivered. And one of the things that we have to do is to provide for expenditures, having to deal with the subject of your report. I take it that you have said here, and for the record, that those expenditures need to go up.

Senator BAKER. I have said that, and the report says that. I have also said, Senator, that I am in a, I suppose, delicate position in that I am now the nominee, the President's nominee, to be Ambassador to Japan, so I have to—I do not have to, but I am going to walk a fine line, and tell you that I think the funding should be increased, and I have said that in the report.

I have not tried to establish priorities between the several programs, and that is, I respectfully submit, this Congress' responsibility and the administration's responsibility.

I commend you for bringing up these points, and I understand the frustration that you express. I have been there; I have done that. I know how that works, but there is an answer, and you will figure out.

I have enormous respect for the Senate, and I have seen it in its best times and its worst times, but even its worst times are better than anything you will find any place else in the world.

Senator NELSON. Thank you, Mr. Chairman.

Senator LUGAR. Thank you very much, Senator Nelson.

Let me add that the International Science and Technology Centers at the Department of State that your commission came in con-

tact with is a multi-national affair. This year the United States is providing about 60 percent of the total budget. The program is providing 25,000 stipends, to former Russian weapons scientists, to work on peaceful projects instead of emigrating to rogue states. Now, that is probably not all of the scientists with weapons knowledge. It was 18,000 the year before when I visited, so we are making progress.

This is an attempt to independently finance these people in projects other than weapons of mass destruction. I would say that has had a retentive force that is considerable.

I noted when I was there in December that the whole Russian Government adopted a budget of $50 billion. It is inconceivable, as we talk about our budget that, approximately $7 billion, single-digit, $7 billion was for their defense budget. As Senator Biden just mentioned, we are heading toward $300 billion.

Now, this is an improbable circumstance for our colleagues to understand, but $7 billion does not go very far if you are trying to pay and feed the troops, and many are not getting paid or fed; providing to retirees, et cetera pensions. So we are back up against the problem of security, whether it is the padlocks or the scientists. The question is, who in the world ought to care about it, and essentially, what should we do and how much should we spend?

Finally, I would just unite my friends, all of our friends, Senator Pete Domenici and Senator Nelson by saying at least on this they are on the same wavelength. Senator Domenici has protested vigorously with the administration, particularly the changes in the Department of Energy areas. He is interested in the others, but he has tremendous knowledge about these problems, and I support him.

So we will not get you into that fight, Senator Baker, but I would just say that we probably have a degree of bipartisan budgetary unity at least in one area, and we are grateful for that.

We thank you so much for coming this morning. This has been wonderful to have you once again back in the Senate where you belong.

Senator BAKER. Thank you.

Senator BIDEN. Mr. Leader, maybe with your new job—and I mean this sincerely—you will be able to use your considerable persuasive abilities to make the case to the Japanese that they are very much in jeopardy as well. I am not being facetious when I say that. I mean it sincerely.

Senator BAKER. Well, thank you. I appreciate the remark. I am sitting here struggling with what I could say in reply.

Senator BIDEN. No. I am not asking you to reply.

Senator BAKER. Thank you.

Mr. Chairman, thank you.

Senator Biden, thank you.

Senator Nelson, I thank you.

It has been a real pleasure, and my experienced with Lloyd Cutler has been extraordinarily positive, and I hope all of this has been helpful.

Senator LUGAR. It is very helpful. Thank you.

It is a privilege now to call our next panel. The Honorable Ronald Lehman, former Director of Arms Control and Disarmament

Agency, under President Bush, and Assistant Secretary of Defense under President Reagan. He was recently appointed to the President's Advisory Board on Arms Proliferation Policy; and the Honorable Graham T. Allison, member of the Russia Task Force, Secretary of Energy Advisory Board, now director of the Belfer Center, Kennedy School of Government, Harvard University, in Cambridge, Massachusetts.

Dr. Lehman, it is great to have you back before the committee, and likewise, Dr. Allison. I will ask you to testify in the order that I introduced you, and we will ask you to proceed with your testimony, Dr. Lehman.

STATEMENT OF HON. RONALD F. LEHMAN, FORMER DIRECTOR, ARMS CONTROL AND DISARMAMENT AGENCY; CHAIRMAN OF THE BOARD OF DIRECTORS, KECK CENTER FOR INTERNATIONAL AND STRATEGIC STUDIES, CLAREMONT MC KENNA COLLEGE, CLAREMONT, CA

Dr. LEHMAN. Thank you, Mr. Chairman, Senator Biden. I am honored that you have asked me to come back again, and I actually think this is a terribly important effort.

As you know, I have been deeply involved in this effort for many years, but I am speaking today not on behalf of any particular program, but rather to help you engage in this reexamination, which I think is terribly important to keep momentum for these revolutionary and, I think, vital efforts.

I have a statement that I can submit for the record, if you wish, and keep my remarks very brief, because you have already gotten into many of the issues that are, in fact, in the statement.

Let me simply say that I think Senator Baker and Lloyd Cutler, and their Task Force, did an excellent job, and I really would echo some of the important points they have made about the utility of these programs for the national security of the United States, and for our overall non-proliferation objectives, but I also want to emphasize the other side of the coin that they highlighted.

This should not become a cheerleading session. We have problems. We need to address those problems. Indeed, the strategy needs to be clearer; the goals need to be clearer.

Senator Baker noted that they had not made some of the tough calls on priorities. Frankly, I found myself in much agreement with the priorities that he personally described, but I think these are issues that need to be addressed, and we have an important opportunity now, because we have a new Congress, we have a new administration, we have a new National Nuclear Security Administration, and now we have changes in Russia. What better time than right now to get these programs on the right track?

Let me say that some of the areas that I think need particular attention, in addition to strategy, goals, and priorities, I think we really do need to look at the dynamics, more objective measures of merit, greater coordination, less bureaucratic encumbrances. I think it is right to emphasize that this is just not a DOE problem. We have other departments and agencies that contribute, and it is not just a nuclear problem.

For example, it is important to deal with the biological weapons issues, the chemical weapons issues, and the means of delivery of

all of these systems, and, frankly, some of the advanced conventional capabilities as well.

I think it is important that the new administration take a good look at this, to make sure that the programs are accomplishing what they are doing, that they are not being counterproductive.

It is not just that we want to get our money's worth, although, I want to emphasize the importance of that, but not just for obtaining congressional support for funding and public support, but, in fact, we ought to know whether or not we are doing a good job, because resources that are spent in one area that could have been spent to address another issue, another threat, even within these areas, is, in a sense, an opportunity cost. We need to address that.

Finally, in your review, and I will urge the new administration in their review, really spend some time with the people in the field who are actually implementing these programs, and not just the United States, and not just the Russians, because there are a number of other countries that are participating in some of these programs, that are very important strategically, and from a non-proliferation point of view.

The second thing is, I think, as was correctly pointed out, a number of these organizations and efforts are intergovernmental, multinational. The ISTC, which you have mentioned, has as its members Japan, as well as the European Union, and numerous other countries. Some of them need to do more and do better, just as we need to do more and do better.

So let me stop there and simply say: I strongly support these programs. They are revolutionary new tools, but they need to be honed. We should not be penny-wise and pound-foolish, but also we should not be foolish. We need to make sure we are achieving what we need to achieve.

Thank you, sir.

[The prepared statement of Dr. Lehman follows:]

PREPARED STATEMENT OF HON. RONALD F. LEHMAN

Mr. Chairman, Distinguished Members of the Committee on ForeignRelations:

I am honored that you have asked me to testify today. This re-examination of the U.S. effort to engage the republics of the former Soviet Union in cooperative nonproliferation and threat reduction is necessary and timely. By insisting that the tough questions about the relevant programs be answered quickly, you who helped create those programs can give momentum to the most important of them. I will do my best to help. I have been involved in some of these programs in the past and continue to be involved with others now, but I am here today as a private citizen and not as a representative of any program or organization.

It is a privilege to follow the testimony of Howard Baker and Lloyd Cutler, the Co-Chairs of the Russia Task Force created by the Department of Energy's Secretary of Energy Advisory Board. I have had the pleasure of working with each of them and with several members of their Task Force numerous times over several decades. I count among the Task Force members several good friends including Senator Jim McClure of Idaho who gave me my first job in Washington many years ago. I also had the opportunity to meet with the Task Force members during their deliberations. At that time, I was involved with DOE in the development of an accelerated conversion plan for the Russian nuclear city of Snezhinsk, in the Urals. Because of the fine work of the Task Force in preparing their report, my presentation today can be brief.

The Task Force is correct in saying that these DOE programs—and I would add related programs in other Departments and Agencies—offer important enhancements to our national security and could use more resources. But they are also correct to emphasize that all of these programs would benefit greatly from a clearer vision of goals, strategy, and priorities. All of these programs also need a more sys-

tematic approach, greater internal and external coordination, stronger leadership, and less bureaucracy. A bold review of these programs in the context of changing circumstances, new challenges and past history is greatly needed. Such a review is necessary to build bipartisan support and public support for the efforts necessary. More importantly, such a review is needed to make certain that they achieve their goals and are worth the cost.

Much of what I say will only bring emphasis to points already made in the Russia Task Force report. As in that report, I wish to focus on the big picture and avoid nit picking. And yet, although I have a similar view, I want to offer a slightly different perspective, drawing upon a number of lessons learned in the creation and implementation of these programs. Again, the view I offer goes beyond the Department of Energy programs. Any review must consider all of the U.S. and international efforts and how they work together. For example, related programs, important and successful, involve the Departments of Defense, State, Justice, Commerce, Transportation, and others. Among these are the Defense Department's Cooperative Threat Reduction (CTR) program and the State Department's science centers: the International Science and Technology Center (ISTC) based in Moscow and Science and Technology Center of Ukraine (STCU). Note that many of these programs involve other countries. The United States and Russia must improve their efforts, but other countries also could do more. My remarks are meant to include all of these programs in general, although my detailed knowledge of each of them varies considerably.

Let me here simply summarize my theme. All of these programs for hands-on cooperation give us much needed new tools for dealing with the post-Cold War challenges of proliferation of weapons of mass destruction and for shaping relations with other nations. They are essentially international security tools; tools that must be more finely honed. They evolved from efforts at hard-nosed, practical and often technological engagement during the Cold War, such as the Joint Verification Experiment (JVE), but they have always been instruments of broader social interaction and change.

These programs are highly leveraged when they involve meaningful peer cooperation to meet common challenges: soldier to soldier; scientist to scientist; citizen to citizen, and I might add, parliamentarian to parliamentarian. They are also more effective when guided by high standards and movement toward the best practices of management and professionalism. They are weakened when they are guided by unfocused policies, dominated by remote bureaucracies, conducted in a government business as usual manner, or judged only through vague measures of merit. Furthermore, these programs cannot be divorced from the broader strategic, political, and economic background. These programs are meant to influence developments in those spheres, and the reality is that their success is influenced by those developments in turn.

A new Administration, a new Congress, and the new National Nuclear Security Administration (NNSA) give us an urgent window of opportunity to make the changes that may be necessary. During this review, I would urge that care be taken not to disrupt the momentum of high priority programs; for example, nuclear Materials Protection, Control and Accountability (MPC&A). At the same time, it is my belief that of all these programs would benefit from a fresh scrub.

More importantly, they would all benefit from a new look at what goals, all commendable, deserve the highest priority and in what timeframe. Take, for example, our concerns about many aspects of nuclear proliferation: the spread of weapons know-how, the spread of technology and equipment, and the spread of fissile materials. How do we prioritize among these? And are they to be address more by downsizing institutions and reducing infrastructure or by keeping scientists in place and enhancing their facilities? And the nuclear threat is not the only threat. What priority do we give to BW, CW and means of WMD delivery? All are a threat, but which is the greatest threat? Even within the nuclear realm, we must consider trades and triage. It has long been conventional wisdom that potential proliferators can easily get everything they need for nuclear weapons except the material. That is all too true, but still an oversimplification. Many potential proliferators or terrorists don't have the knowledge and the technology, but may, in fact, seek to obtain a full-up nuclear weapon.

The United States with all the money it could ever make available, cannot make every risk disappear any more than it can by itself float the Russian economy. Indeed, there are no systems we can put in place anywhere that will absolutely eliminate all dangers of diversion, particularly in the face of the so-called "insider threat." We can, however, help reduce the threat. Only part of that is through the introduction of measures such as Western style inventory management and physical protection. Much of this is by being a catalyst for awareness, initiative, responsi-

bility, and personal accountability at all levels throughout the countries of concern. In the case of Russia, we must make it absolutely clear that Russia is responsible for the security of its material. The U.S. can and, I believe, must help, but paternalism will only be counterproductive.

And new thinking is needed about what policies and procedures will best achieve those goals. Perhaps new or different approaches are needed. Indeed, a review is needed of what programs should be essentially government to government and what programs are best left to industry or non-profits, in either tight or loose cooperation with government. Many of these programs are very centrally international security cooperation programs and their core must remain government to government, military to military, laboratory to laboratory, and the like. In other areas, we must face one of the realities of the modern world; namely, that the private sector can bring to many of these challenges more resources, greater know-how, and more free energy than can government. In areas in which our national security interests are enhanced by economic development, the role and resources of the private sector are vastly larger. The government sector is notoriously weak at demonstrating to formerly centralized economies and their institutions how to make a real profit in a real market economy. This is not to say there is no important government role. It is a question of the right role and the proper balance.

A related question is that of metrics of success. The measure of merit for these programs is not money out the door. Indeed, in some cases, there has been a reluctance to introduce real measures of merit for fear that this or that program will be found wanting. These measures of merit need not always be numerical, but they ought to give some insight into the value of the program to both sides. Above all, we must ask the difficult question of whether the provision of funding in some cases is counterproductive. If we do not take more seriously the evaluation of the quality of the output, it is hard to justify to the Congress, to the Public, and to ourselves even small inputs. To establish meaningful measures of merit, however, we must acknowledge that these programs serve many different purposes, all at the same time. They are primarily nonproliferation programs, and yet from them we—and our counterparts in participating countries—can receive greater and mutual scientific advancement, economic gain, and reassuring transparency. We can, in short, normalize our relationships. We must not forget, however, that these programs are important precisely because the situation is not normal. Russia and numerous other nations are going through difficult transitions in an age of rapid change and great turmoil in much of the world. Some of these programs are most valuable when relations deteriorate.

The multiple utility of these programs requires all the more that they be well coordinated: within each Department or Agency, within the U.S. Government, with foreign governments, and with the private sector. Without proper coordination, mistakes are made and synergism is lost. Within these programs can be found examples of the value of working together. Fine professionals, many of them unknown to members of this Committee, have made these programs advance, often in the face of immense obstacles created by legacies of the Cold War and the propensity on all sides to substitute "administrivia" for management. This Congress and the new administration would contribute greatly to the effectiveness and morale of public servants if they could cooperate with each other and with other nations involved streamlining necessary, but excessively cumbersome procedures, for example, for travel, access, and interaction. Many of the problems are found in the host countries, but some debilitating problems are to be found in our own.

Mr. Chairman, in summary, these programs have given us extraordinary new tools that are desperately needed to deal with proliferation of WMD. They involve tough, hands-on, practical engagement that is needed in this dangerous era of transition. Now is the ideal time for a review of each of the programs individually, but also of all of them in their totality. All of these programs have had some success, but many of these programs have fallen far short of what was originally promised. Even as new programs have been started, follow-up on existing ones is often weak. All of these programs are underfunded, but some are more urgent than others, and most would benefit from longer term budget planning and stability. Although none of these programs has matured as rapidly as we would like, some need more balanced participation or a handoff strategy. This is not the same as an exit strategy, but some thinking should be given to that as well.

All of these programs have weakness that can and should be corrected. Ideally, the total would be greater than the sum of the parts. In fact, a blurred vision of the objectives, parochial implementation, and uneven cooperation with other nations may have resulted in the total being less than the sum of the parts. There are many lessons to be learned and no one person or place that can impart all of those lessons. All of these programs involve a number of truly heroic and largely unappreciated

individuals who do the work necessary to move mountains only to move molehills. You, Mr. Chairman, have worked with some of these individuals, and I think you understand the kind of very fine professionals to whom I refer. I hope that the Congress and the new administration will talk to those people who actually implement these programs—especially those in the field—as they conduct their reviews. Thank you.

Senator LUGAR. Dr. Allison.

STATEMENT OF HON. GRAHAM T. ALLISON, MEMBER, RUSSIA TASK FORCE, SECRETARY OF ENERGY ADVISORY BOARD; DIRECTOR, THE BELFER CENTER, KENNEDY SCHOOL OF GOVERNMENT, HARVARD UNIVERSITY, CAMBRIDGE, MA

Dr. ALLISON. Thank you very much, Senator. It is a great honor for me to appear before the two of you.

If I go back to an earlier point that was made, I believe strongly, and have written that the most significant piece of legislative initiative in the period after World War II is the legislation for which you and Senator Nunn were responsible. So in some sense, we are discussing floods with Noah, so I apologize for that, but it is a great pleasure to be here.

I will try to be very brief and pick up the comments that have already been made, because I think Senator Baker and Mr. Cutler rightly represented the Task Force of which I was a member, and pleased to serve as a member. So just by way of introduction, what I offered and what I submitted are three simple questions, it seems to me.

The first question, which Senator Biden has already addressed directly, is: Is the principal finding of the Baker-Cutler Task Force true or false? Is it correct that, as the Task Force says, the most urgent unmet national security threat to the United States today is the danger that weapons of mass destruction, or weapons-useable material in Russia, could be stolen, sold to terrorists or hostile nations, and used against American troops abroad, or citizens at home?

As Senator Baker said, if one agrees with that proposition, virtually everything else follows. If that proposition is incorrect, then maybe there is a different discussion. So I think that is a good place to start.

The second question goes particularly to the point that Senator Biden raised in his earlier comment. Relative to other items in the U.S. defense and national security programs, relative to the rest of the spending and the $300 billion-plus Defense budget, or other related national security budgets and programs of the U.S. Government, for example, the National Defense Missile, called for by President Bush, where does what you might call a national nuclear defense, if we were to choose a word, that the Baker-Cutler Task Force recommends, rank?

Specifically, as you look at the spectrum of threats to American citizens at home as Senator Biden was saying, where do weapons of mass destruction, warheads delivered by long-range missiles for which we might need a missile defense, rank in comparison to the loose nuke threat that the Task Force is focusing on?

I think rightly, as you suggested, Senator Biden, that one needs to look at the whole spectrum, and to think of these not as contrary

items, but as part of an overall defense effort looking at U.S. interests.

Finally, if one accepts the Baker-Cutler diagnosis, what should Congress do? Well, the Task Force, as you have already mentioned, Senator Lugar, recommends that the President in consultation with Congress, at the beginning of a new administration now, promptly formulate a strategic plan, with a specific goal, the goal being to secure and/or neutralize all nuclear weapons, and all weapons-useable nuclear material in Russia within the next 8 to 10 years.

So set a very high mission and objective, and to that end, have a strategy, organized and planned, almost like this was a military operation, as if it were Desert Storm, or something else, something that mattered centrally to the well-being of the Nation.

To that end, we outlined a plan—not a final plan, but we outlined what it might look like, and we gave a sketch of a budget, at a level of about $3 billion a year over the 8 to 10 year period, which we think should be shared significantly with allies. And I am confident that with Ambassador Baker in Japan we will be much more successful in actually getting the Japanese to contribute to this effort, and, indeed, to the Russians, because, again, part of what the plan called for is a transition to an end-state, in which the Russians will be able to sustain themselves with other income, for example, income that could come from spent fuel storage schemes of the sort that have been proposed and that are now under very active discussion.

So to conclude, obviously, as Members of Congress, or as an expert, I would be—I am somewhat reluctant to offer tactical advice to Members, particularly to the father of the Nunn-Lugar, but I think that sometimes the temptation is to say, "Well, let us impose a legislative requirement that the administration submit such a plan," and having, while in the Defense Department, written some such plans, they usually elicit a bureaucratic response that does not engage people seriously.

Much more important, indeed, I think what is central here, is that people who believe in this analysis need to engage members of the administration, and Members of Congress, and the public in a debate about a comprehensive strategy that deals with the most urgent threats.

In that context, looking at national missile defense and at the danger of weapons or weapons-useable material being stolen from Russia as part of the same picture, and if it needs to be addressed in the same terms, then ask "Which is more urgent? Which is larger? What is the prospect that the action that we could take would have the desired effect?", to that end, I would recommend to you, as I do in my submitted testimony, a speech that your colleague, Senator Nunn, is going to give at the National Press Club tomorrow, trying to engage more of the public in this debate.

Thank you very much for letting me appear.

[The prepared statement of Dr. Allison follows:]

PREPARED STATEMENT OF HON. GRAHAM T. ALLISON [1]

It is an honor for me to appear before the Senate Foreign Relations Committee today as part of your review of Department of Energy Nonproliferation Programs with Russia. Members have received copies of the Baker-Cutler Task Force Report [2]

and have heard from Messers. Baker and Cutler. I will therefore forego a lengthy opening statement and respond to Members' specific questions.

In three minutes of introductory comment, let me suggest three central questions for Members' consideration.

1. The *threat.* Is the principal finding of Baker and Cutler in the DOE Task Force true—or false? Specifically: are Baker and Cutler—and their colleagues former Senators McClure, Nunn, Simpson and other members of the Task Force—correct when they assert that: "The most urgent unmet national security threat to the United States today is the danger that weapons of mass destruction or weapons-useable material in Russia could be stolen and sold to terrorists or hostile nation states and used against American troops abroad or citizens at home"? Or are they incorrect?

2. *Priorities.* Relative to other items in U.S. defense and national security programs, for example, the National Missile Defense called for by President Bush, where does the "National Nuclear Defense" that the Baker-Cutler Task Force recommends rank? Specifically: as one analyzes the spectrum of threats to American citizens at home, where do weapons of mass destruction warheads *delivered by long-range missiles* rank in comparison to the "loose nukes" threat the Task Force spotlights?

3. *Prescription:* If one accepts the Baker-Cutler diagnosis, what should Congress do? The Task Force calls on the President, in consultation with Congress, to quickly formulate a strategic plan to secure and/or neutralize *all* nuclear weapons and weapons-usable material located in Russia within the next ten years. To that end it offers a sketch of a plan for "finishing the job" and suggests a budget of approximately $30 billion—to be funded by the U.S., our allies, and Russia. At the end of this road in 2010, Russia would have in place the programs and income streams to sustain this posture.

Congress can, of course, impose a legislative requirement that the administration submit such a plan. Such a requirement would most likely elicit a bureaucratic response.

Instead, I would urge Members who are persuaded by the Task Force report to engage key members of the administration on these issues. Members might communicate their readiness to address National Missile Defense as a part of comprehensive strategy that deals with the most urgent threats.

My suggestion is not that you hold missile defense hostage to what I believe are larger and more urgent threats, but rather that you stimulate serious debate among members of the administration, Congress, and the public about nuclear and other WMD threats to Americans' lives and liberties. As part of that effort, let me commend to you and others here a speech your former colleague Senator Nunn will deliver at the National Press Club tomorrow.

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[1] Douglas Dillon Professor of Government at Harvard and Director of the Belfer Center for Science and International Affairs.

[2] "A Report Card on the Department of Energy's Nonproliferation Programs with Russia," United States Department of Energy, The Secretary of Energy Advisory Board, January 10, 2001.

Senator LUGAR. Well, thank you very much for that testimony.

I would just start by saying that I think you have highlighted what I found to be the two most important points of the report. First of all: Is the threat of these weapons of mass destruction the greatest threat we face?

I believe that it is, but you have to say, compared to what, the Russian Armed Forces, the Chinese Armed Forces, the armed forces of somebody else? What are the other threats out in the world?

As you think through the ways in which more Americans might lose their lives, our cities might be destroyed, and other terrible things happen, what we are talking about today is the biggest threat.

Now, we may be in denial about it, but nevertheless, it is there. And the Commission has once again sort of put its arms around the situation, but then gone beyond that to say for $30 billion over

8 years, you could do something effectively about all of it. Now, this is with cooperation of Russia.

I think it is counter-intuitive for many people as to why over the course of 10 years Russians would cooperate with us, would guide us into more and more layers of the problem, but it was not difficult for this Commission to understand. It is because these items are a threat to Russia too. It is their lives; whatever is going to be left of their country is also at stake.

They have built an awesome amount of weaponry that has overwhelmed them, and it might overwhelm us. So that is why we must take these threats seriously and respond to them in a coordinated well-rounded fashion.

Ron Lehman has been through all of the difficulties of working on these programs with Russia. It is difficult, because some problems to dispose weapons materials affects markets in the United States. They sometimes become commercial problems.

Some would say, "Well, this is absurd. Here, we are talking about the future of the world, of mankind, people being blown up, and you are talking about the price of uranium going up and down in the United States."

Well, it is a concern for those people in a very parochial way, and we understand that. But on the other hand, we have not ever been able to come to grips with exactly how the flow of this goes on, even if there are willing sellers and buyers. Even as we speak, with the privatization of a part of this, we have considerable difficulty; but, nevertheless, that is a worthy objective. These programs take these dangerous materials out of circulation.

Likewise, the plutonium has been even tougher. Now, Senator Domenici, to his credit, has done a lot in this area. He has tried to move both the last administration and this one into this area, but the Russians have been very reluctant, as you know. They have felt there was value in every ounce of the plutonium.

Now, they are prepared to talk about changing a third of it into reactor fuel. But even then, this is an objective that will require considerable international negotiation with Russian partners, because it is not very clear how we get to the end of the road, even if the funds are available to do it.

But at least you have tried to quantify this with a strategic plan of the fact that this is the biggest threat, and this is how we might all proceed to save our two countries and the rest of the world in the process.

I remember, Dr. Allison, one hearing in which you appeared another witness brought to that hearing a steel shell, that he calmly removed during the course of his testimony, and laid out on the table. He then used a Geiger counter to show that he had radioactive material.

And this disturbed some people in the audience, including some Senators, who were looking at all of this.

He pointed out that if the material was highly enriched uranium in this particular shell, he would be close to having what he needed to make a nuclear weapon. As a matter of fact, the particular blow would be four square miles around it.

Now, for the benefit of my colleagues, I visited a chemical weapons storage site in Russia as scheduled, 1,200 miles east of Mos-

cow. I asked a Russian major to photograph me putting an 85-millimeter shell filled with sarin gas, taken right off the shelf there into the thin briefcase. There was room for three more in the thing.

Two million shells were filled with poison gas. It wasn't nuclear but deadly nonetheless. I tell this story to show that the threats we face are vast and diverse. These chemical weapons were stocked in a wooden building with glass windows. Security was good, because the United States had provided assistance to improve hardware at the site.

Our hope is that we will soon begin destroying the Russian chemical arsenal one weapon at a time.

But that will require appropriations from both the House and Senate. And for the last 2 years, the House has said "no." So we have considerable work to do, even with those things that are the most obvious, in terms of proliferation. This 2 million shells are stacked like logs there, and they are portable, either by a human being, or many could be taken out in a normal car.

This is why the problem is urgent; although many people have wrestled with it temporarily. There is the destruction of the plutonium, the sale of the uranium, the destruction of these chemical weapons. It can be done, and our Government has done a good job of identifying the problems, and moving toward solutions.

Let me just ask: You both have mentioned other countries getting involved in the response to these threats. The Germans are involved with the chemical weapons business, but they are the only other country making a substantial contribution.

How do we go about effectively engaging the attention of other countries that it is their world, too? In other words, one thing that some Members of Congress would say, I think quite rightly why us? Why the United States? Some would say, "They made their bed. Let them sleep in it." They have created a horrible mess, and their country may blow up over there. But if that were to happen we would be adversely affected, this is one of the problems of living in a small world.

Both of you have been involved in this, and that is why I ask you. You have traveled widely. You have talked to people in NATO, as well as in Japan, or elsewhere, who might have an interest in these threats. Do they see it in the same way? Would they agree with the thesis of the doctrine that has been introduced today: that this is the most urgent security problem, not only for us, but really for them, too? Would either of you comment?

Dr. ALLISON. I will make a quick comment, because basically I agree here with everything that you have said. There has been a temptation by other countries, particularly ones that have the means, including Germany and Japan, to say "This is an American problem. Americans deal with nuclear weapons. We are not part of that story."

We have been unsuccessful and ineffective in pressing these countries to the extent that we should have. So that is my bottom line on it.

I believe that for us and for them, there is a temptation almost, as Senator Baker was saying earlier, to believe that this is happening on a different planet, and if it were on a different planet, it might be too bad for this generation of Russians.

As a veteran cold warrior, I would normally say that they should have to make their own bed, but this is not somewhere else and consequences of this could happen here. The job of people who are taking responsibility for American security is to do what is necessary for American security, even if, quote, "fairness" is not the result.

Finally, I think that Senator Baker will have his work cut out for him, but I remember very well Desert Storm, and I remember another Baker, Jim Baker, who went out to Japan, initially with a proposal that they contribute to what was actually a great victory that affected oil prices, of which Japan was a significant beneficiary.

Initially, the proposition was that Japan could not pay more than—I cannot remember, but I think it was $200 million. And eventually, they said, well, maybe they could contribute $500 million, but Senator Baker left with $12 billion, $12 billion.

I think it was a failure of the Clinton administration not to get some significant contribution from Japan, and I would say similarly from Europe, but it will not be voluntary; it will be extracted.

Senator LUGAR. Well, I appreciate that point, because without putting extra burdens on Senator Baker's confirmation, I am hopeful that there will be some transference of this experience that he has had.

As others might point out, there were contributions from other countries too. I cannot recall, but it was an international effort, $50 billion or $60 billion was sent to pay for the war, essentially, because the security interests of other nations were at stake. Without that fuel coming from the Middle East, their economies are dead. They understood that.

I remember being in the White House with former President Bush when he got the call from the Japanese Prime Minister for the first $1 billion, and he was elated that finally they were making some headway.

Now, maybe as you have looked at these issues, you have identified potential donors. I am sort of trying to tease this out in the process of utilizing your experience, but I think we are going to have to think through this.

And I hope the administration will try to think along with us because this is expensive, and my guess is $30 billion will not cover all of it.

Finally, we have to come to grips, if we ever got agreements on final reconciliation of all the weapons and materials, we would have to understand that previous experience would indicate that prices escalate as you proceed.

Dr. Lehman, do you have a thought about it?

Dr. LEHMAN. Mr. Chairman, just to illustrate why it is so important to work with our friends around the world: As Graham was answering your question, my pager went off. One of our colleagues in Brussels wanted to tell me that there had been changes at the Ministry of Atomic Industry in Russia, and to make sure that I rushed to see the latest information.

I think you are absolutely right. We need to work very closely to get more international buy-in. Let me begin with an anecdote that is a confession of a mistake I made, an inaccurate analysis.

When we were first engaging in the Stockholm negotiations, I was very nervous, because I was used to multinational negotiations in which you had a divided alliance, non-neutral and non-aligned nations that are not entirely neutral and not entirely non-aligned, and a fairly rock solid Warsaw Pact.

I was wrong, in fact, largely because the Transatlantic Alliance was under pressure. In the INF context, the Alliance stepped up and coordinated its efforts extremely well. It became—it was one of the high points of Alliance success.

In the East, largely because of developments such as solidarity in Poland, we began to see the first signs of fissure. But one of the most important developments was that because all the countries involved had to negotiate about their own assets, their own forces, and their own interests, we suddenly discovered that the neutral and non-aligned were much less willing to simply tell us what we had to do, and rather had to look out for their own interests.

The result was an agreement that actually served everyone's interest, and turned out to have revolutionary security and political impact.

Why do I tell this story? Because you asked about the Chemical Weapons Convention and destruction. I was deeply involved in that negotiation, and as you know, some people blame me for its successful conclusion.

Having said that, let me say that one of the issues I had to deal with throughout the negotiation was going to many of our allies and friends and colleagues around the world and asking them, "Do you understand the financial implications of the types of things that you are insisting upon, because we are not going to pay all the bill?"

Well, as you know, the United States has an uneven record of paying its bills, but nevertheless, we are the big billpayer. I think we have to go back to some of these countries and remind them that they have obligations, because how can we persuade our people, our Members of Congress that this is so important if nobody else thinks it is?

Senator LUGAR. Indeed. Well, I appreciate both of your comments on this. They are very important.

Senator Baker, in response to a question, I think, from Senator Biden or someone else, indicated that you needed somebody in the White House close to the President to coordinate all of this. If it is the most important security issue, it deserves that kind of coordination and attention.

Conceivably, if this person were there, he might very well conduct these negotiations, and with the strength of the President, approach our allies and tell them its time to "pay up." I think it will take this kind of effort as opposed to Members of Congress opining about it and sort of suggesting that everybody ought to be thinking about it, because I think this is a big sum of money.

It is either important or not important, if we decide it is very important, it should happen. So the question then is: Tactically, how do you do it after you have determined a strategy?

Let me turn now to my colleague, Senator Biden.

Senator BIDEN. Mr. Chairman, I would like to pursue three different avenues, and if I do not get done within my time allotted

here, maybe I can come back to it, because I do not want to trespass on the time of my friend from Florida.

Mr. Secretary, you have been involved with several administrations. Your knowledge base is deep and respected, and you are not considered to be easily duped or Pollyannaish about what possibilities exist—I mean this sincerely—with Russia, or any other country that we have been at odds.

Dr. Allison, you have worked with Democratic and Republican administrations. Sometimes I suspect critics would suggest that you are too enamored with—I think you are not—but too enamored with the prospects of treaties and agreements with the Russians, a category I am often placed in. So you have slightly different perspectives, and you both have considerable knowledge bases.

One of the things, I think, in order to get to where Senator Lugar acknowledges we have to get, to figure out how we can get the administration, to decide at some point that this is a priority. And there has to be some coordination—whether it is by a single person, or whatever it is. There has to be someone who can speak with authority, when they arrive at a consensus on how to deal strategically with this problem.

I might note, by the way, before I begin with a specific question, that your threat analysis—and you cannot see this chart, nor can anyone else—but your threat analysis is no different from the unclassified threat spectrum put out by the Joint Chiefs of Staff. I know you have copies of this.

The vertical line on the one side is the potential damage to our vital interest, and the horizontal line is the drain on our military capability. This line is the threat continuum, in terms of from most likely to least likely, and the other line is the probability of occurrence.

What we are talking about here ends up here, although it is not laid out the same way you laid it out in your report. A terrorist attack has a much higher probability than a strategic missile attack, rogue missile attack, major theater wars, et cetera.

So the assessment here, I guess the only point I am wishing to make is: It is not as though this report came along and differs in any material way from what others tell us about the threat. In terms of your question, Graham, "Is the principal finding of the Task Force true or false," the fact is that the Intelligence community and the Defense community of this country have reached a similar conclusion that it is a relatively high threat, and it is a higher threat than many other things that we talk more about.

But what I want to get at here is coordination: This is not directed at this administration; let us talk about the last administration. I was somewhat frustrated by the fact that the last administration, although generally acknowledging this problem, and although supporting the initiatives with more money, did not go the whole route, and take this coordinated notion, and try to put it in place, as did the guy who literally thought of and drafted the Office of National Drug Control Policy. He spent 8 years realizing that not only did Presidents Nixon and Ford not like it, but President Carter did not like it either, and President Reagan did not like it either. No President wanted to acknowledge the need to take 32

agencies dealing with drug problems and have some coordinated strategy.

So I understand the institutional resistance to new structural frameworks to deal with the problem. But talk with us a little bit about: Why is this such a hard sell, even with an administration that you think would be ideologically more inclined to support such an initiative, and not fear, as I am speculating, that it would be put in competition with other things they place a higher priority on?

Could you be a little constructively critical for me as to why more was not done in the last administration?

Dr. LEHMAN. As you know, most of my friends feel very strongly about economic engagement, and most of my friends are right. All of my friends are right. You have to make these tough tradeoffs. Different departments and agencies have different emphasis, different programs. To some degree, the law tells you that what you believe is where you sit. You have certain mandated responsibilities.

My own view, as Senator Baker's, is to some degree you have to give the President some freedom to organize, but in the end, that also suggests that we know who should be held accountable and is responsible. It is the President.

Now, over the years, there have been a number of ideas about how you help the President, because the President has many responsibilities. The ideas of czars come and go. Some czars have actually worked, but it is usually because the person is very competent, very influential, and has the ear of the President.

Senator BIDEN. Right.

Dr. LEHMAN. If they do not have the ear of the President, then they need to have a lot of other ears, and that is hard.

Let me also comment: You may remember some years ago you drafted legislation to create a nonproliferation agency. I said to you at that time, "We do not need that agency, because it already exists." That was my agency at the time. I said, "Times have changed. Our priorities need to change, and this is exactly what we ought to do, is to give that agency a strong mandate."

In the end, the decision was made to move it in a different direction, to eliminate that agency completely. The rationale for that action was, correctly, that everybody should care about proliferation, but when everybody cares about nonproliferation, who do you hold accountable for nonproliferation?

Senator BIDEN. Exactly.

Mr. LEHMAN. Well, you hold the President accountable, but he has to be doing other things. So where do I come out? Based on having served in just about all the departments and agencies at one time or another, I have become NSC-centric. I think you have to have a strong NSC staff, not to run programs, not to implement, but on behalf of the President to make sure that his interests are being served, and that everybody is coordinating, and that there is a coherent strategy, coherent priorities, and effective implementation.

Now, you can give them all the titles you want, but in the end, if the President says, "My view is Cabinet government," and you

have rogue departments and agencies, you do not have effective government, the end.

Senator BIDEN. Let me ask one more question.

And I would like you to answer as well, Graham; but, Ron, if you would follow-on. How much of a role does ideology play here in this issue of nonproliferation?

Here, we had one administration that came to office, was there for 8 years, and said nonproliferation was their highest priority. Remember that? That is what they said. They said that it was—well, I think they said the highest at one point, if I am not mistaken, but a very high priority. They talked about it, and we still did not get the kind of focus we are talking about.

I am not sure—and in fairness to this administration, it is brand new, only 8 weeks, or 9, whatever it is but how much of a role do you think higher priorities play in not addressing this subject? If I can make an analogy to a totally different issue, so that I am not making judgments about this administration, years ago, I drafted a piece of legislation called the Violence Against Women Act. Now, you may say, what does that have to do with this? It does not have anything to do with this, except the point I am about to make. I thought when I drafted that—and I worked on it a long time—that the groups that would be the happiest with me, most embrasive of the initiative were the leading women's groups in America, the National Organization for Women, all the various organizations. They were resistant. They did not support the legislation for the first couple of years.

First of all, I was suspect, because I was a guy. A guy was writing this—and I am not being facetious now; I mean this seriously. Second, because, as I learned—I was so confused about this, I could not figure it out, but once I figured it out, I was able to get around it—there was a genuine concern that if this became the priority in the Congress, the issue of choice on procreation would be relegated to a less important standpoint, and the issue of gender—an issue of sexual preference, that is, homosexuality being given an equal standing—would further be reduced, and the focus would be that we all, not wanting to address those, would turn and say, "OK. We are going to deal—to satisfy the, quote, 'women's groups'—we are going to deal with this issue."

Well, when I found that out, what I did was, I literally went out in the field. I went to Rhode Island for a conference with all the providers of help for rape victims, and all the providers and I went to other states. And then the word got back here that this was a big deal to women out there, and all of a sudden things began to change. My legislation got support. It passed. Now it is a bipartisan and strongly endorsed notion.

The reason I mention this to you is that I cannot quite get set in my mind what we have to do to—we move the fulcrum here on this issue—to shift the emphasis to what everyone, I have to believe, knows in their gut and knows intellectually is very important. But there seems to be almost, in my mind, in my judgment, an unwillingness to address nonproliferation as frontally as they would like to, for fear that some other item on their agenda will take a back seat, or will not be given significant priority.

I will read from one paragraph in the report, Graham, on page eight. It says, "Through 1999, Congress authorized some $3 billion for these programs. The Clinton administration's expanded threat reduction initiative proposes to spend $4.5 billion over the 2000 to 2004 timeframe. This is an insignificant amount of money compared to U.S. spending on nuclear weapons during the cold war. It is estimated that from 1940 to 1996, the U.S. spent more than $5.8 trillion in constant 1996 dollars on this nuclear weapons program.

"For fiscal year 2001, the Defense Department plans to spend roughly $7.3 billion, more than a 25 percent increase than the previous year to defend and counter the worldwide proliferation threat posed by weapons of mass destruction. For a small fraction of that sum, DOE and other U.S. Government agencies, are working to eliminate critical elements of the global proliferation threat. Accelerating this process to secure all attractive systems and weapons-useable material is a worthy and important goal."

Now, the reason I read this is it seems as though, to me, there is a mind set over there in both administrations that maybe this competes with other things that we want to have happen more.

A very long question. I will not ask any more, but can you followup, Ron, and speak to that for me? And then, Graham, if you could answer the whole question. And I will yield the floor.

Dr. LEHMAN. That is one of the great and big questions. Let me try to be somewhat brief. All of these issues have many dimensions. They have economic dimensions, both overseas and at home. They have environmental dimensions. Many of them, like material disposition, are related to your view of energy policy, disarmament policy, and all of these weigh on the priorities you give to the nonproliferation aspect. And even within the nonproliferation aspect, there are different calculations you have to make.

That is why I say in the end, you cannot confine this to one department, one type of weapon, and one type of approach. You have to integrate that. Frankly, I do not think anyone has actually done that very well yet.

Now, having said that, I think your reference to charts like this was very useful, because to some degree you are dealing with the probabilities of something happening versus the consequences if it happened.

I have a chart I sometimes use that has a curve from the cold war that basically says, you know, all-out nuclear exchange, the probabilities are very low, but the consequences are very high, and if you check the box, the size of the threat is a certain size.

If you go out and you look at wars in the Nth world, the probabilities are very high, but in many cases the consequences are very low, and you can draw a box that calculates the size of that threat. Now, it is all kind of subjective.

Then I asked people, what does that curve look like today? It is very interesting to just give people a blank piece of paper and draw it, because they all draw it quite differently. For nuclear abolitionists, it is a very steep curve, having to do with the U.S. and Russia; and, in fact, for some of the Western abolitionists, it is the U.S., because we are viewed as an arrogant superpower; we are the threat; we are going to cause the incident.

On the other hand, if you go to the Pentagon and say, "Draw your curve," it is going to be a very flat curve. They are not too much worried about the central nuclear exchange; they are worried about the fact that in these areas where the probable threats are rising, the consequences are also rising, because of the spread of weapons of mass destruction potential and capabilities.

Someone has to step back and do that kind of analysis. As Aristotle said, "We should not demand more precision than the subject matter warrants," and I think if you get a lot of Beltway Bandits coming in with fancy charts with real numbers, be suspicious.

Having said that, I think reasonable people can take a look at the threats and make reasonable judgments about the priorities. Some of those issues come up right in what you are talking about. For example, the whole question of plutonium disposition, that needs a good look.

I tend to agree with what I think I heard Senator Baker say, which is, some of the most important things you have to do is influence the behavior of the Russians, because, first of all, it is their responsibility to guard their material. The material that gets stolen, or maybe more importantly, the weapon that gets stolen, if it is stolen by a Chechyan, he may not be interested in the United States.

I was in Moscow 2 weeks ago, and I was rather pleased to see in the newspaper a real debate over the consequences of arms sales and technology sales among the Russians, saying, "Why are you selling to some of these people?" Now, in some cases, these are sales to countries that were fraternal friends and allies of the Soviet Union, and there was not a lot of belief that some of those countries will be threats.

In other cases, there was some skepticism, but what I also found interesting was the Russian public and intelligencia asking the question, "How much are we secretly subsidizing these sales? How much are we increasing our future financial mortgages?" Well, they need to have that debate, but we need to help. We can help, and that is why I think these programs are important.

Now, let me get to the thing that has to do with the consequences of special interests and the process that you-all know better than I know. Years ago, when I worked on the staff of the Senate Armed Services Committee, one of my additional duties was to deal with the national security stockpile. So I was the new kid on the block; I wanted to do my job well and professionally, so I thought it would be appropriate to go look at legislative intent, "Indeed, what is the law? What is it we are supposed to do?"

Well, with a little bit of tongue-in-cheek, let me summarize what the Congress in its wisdom had passed and Presidents had signed. You buy when things are scarce. You sell when they are plentiful. You do so at no cost to the government, and without impacting on the market price. Well, you know, I was young, and so I figured, "Well, all right, I will do that."

Let me tell you something: The consequence of this legislation, cumulative over time, no one in particular to blame, was most of the national security stockpile of the United States was junk, not relevant to anything we were going to do.

On the other hand, there were a few items in that stockpile that had appreciated at an incredible rate, and this turned out to be some of the best investments that government had ever made. It may be the only time in history that anything the United States did ever made a profit, at least with respect to those items.

I raise that example, in part, because it is not this issue, but to highlight in a more neutral context the kinds of issues that I am afraid people are going to have to step up to, because when—you ask how many billions of dollars do we want to spend on putting U.S. plutonium in glass, or mobilizing it in some way, versus how much we want to put on making sure that the Russians actually not only have physical security, but they actually have all the other methods under way to make sure they have a handle on their material.

Some years ago, about five or six—no, more than that, 6 or 7 years ago, after the National Academy of Sciences did its study on long-term plutonium disposition, there was sort of an internal brainstorming session. And a large number of government officials got together and informally went off in groups, and I was asked to chair a little group on the international security consequences of long-term plutonium disposition.

And I did not have any particular ax to grind, but one of the things I learned was that special interests manifest themselves in many strange ways, but in the end, that group reached a consensus. And I think that it is a consensus that we ought to at least revisit and check to see if it still applies today.

And that was that the most important long-term security implications of plutonium disposition were the short-term security implications, because what was clearly the case is that because we were trying to go to the Russians, get in their face, and say, "You do not understand. Plutonium is bad," they would not engage us on securing plutonium.

Now, fortunately, we were able to turn that around and finally get them to engage, but they saw this as a conspiracy. Some describe it to me as potential economic warfare. Well, the truth is that we in the United States are not enamored of a plutonium economy. Some in Russia are totally enamored of a plutonium economy.

Those are, in many cases, economic issues, but they in other aspects become disguised as nonproliferation issues, even though they are truly important nonproliferation consequences.

I have probably gone on too long. I will stop there.

Senator BIDEN. Dr. Allison.

Dr. ALLISON. I will make three points quickly. First, the puzzle you raised, Senator Biden, about why it is hard to raise $1 billion a year, as the Clinton program roughly has been, or $3 billion, as the Task Force calls for to address the most important threat to U.S. national security: It is a puzzle, and I think your notion of trying to understand how the fulcrum works and where and how it might be moved, is very important.

If the Defense Department had as a mission homeland defense, which is emerging, and if we are asked and required to explain how in order to defend the American homeland this issue was addressed, and where in the Defense budget, and where in the De-

fense programs it was dealt with, one might be able to get it better into a picture, rather than having it spread. That is my first point.

The second point on your question of high-level coordination: As Nunn-Lugar-Domenici had recommended, the Task Force recommends that in the White House there should be somebody, as Lloyd said, of gravitas, with the President's confidence, able to deal with the rest of the U.S. Government, able to deal with the Congress, and also able to deal with oyr allies.

As you heard from Senator Baker's presentation, he has this issue; he understands it deeply, and cares very deeply about it. My hope was that this was going to be his assignment, so I am not proposing that you divert him from Japan—though, he would have taken this assignment, I believe, and he would be able to do this assignment, but he is the kind of person that you need.

The final, third point on your first question: If you go back to Nunn-Lugar in 1991, or your puzzle about Clinton, and the Clinton administration, the highest priority, but not really a strategic plan for getting the job done, and not the budget that would go against a program of that sort, Nunn-Lugar was conceived in a deficit-defined environment. So you can remember very well that anything that costs money, "Forget it." Even in and through most of the Clinton administration there was a deficit-defined environment.

The reason why, the Task Force believes, this is a very special opportunity for the new administration and for Congress now, is that this is a new environment. And one can ask the question relative to the crime bill that you mentioned, or relative to national missile defense, or relative to many things that are elsewhere in the budget, "How important is this? How much impact can you make on it? And for how much?"

Senator BIDEN. Thank you very much.

Thank you, Mr. Chairman.

Senator LUGAR. Senator Nelson. Let me mention to all Senators that a vote will occur at 12:15.

Senator NELSON. Mr. Chairman, I will be very brief. It is an honor for me to participate here with two Titans on this subject——

Senator LUGAR. That means we are old.

Senator NELSON [continuing]. And likewise, on the panel, both panels.

I think we have a job to do. Picking up on what Dr. Allison has just said, in this environment of a surplus, we better strike while the iron is hot, because a year from now there may not be as much surplus, and if this is a high national priority, we better strike.

And, Mr. Chairman, you ought to be having a prayer session with Senator Domenici, so that he has a sufficient amount in that mark.

Mr. Chairman, you also ought to be having a conversation with Senator Byrd and Senator Stevens, so that there is an appropriate amount in that appropriations bill. And you give me the orders, and I will be your lieutenant, and I will go carry some of the water for you.

I am curious, Dr. Allison. Back in 1992, I had the privilege of being at your Institute of Politics, and it was right at the time that the Soviet Union had started to disintegrate. And I had posed the

question to you, "Do we think that the tactical nuclear weapons are going to get out into hands that would do dastardly things?" And you felt fairly confident at the time that they were not.

Would you bring that answer forward, now another 8 to 9 years, not only with regard to the tactical nuclear weapons, but with regard to the uranium, and plutonium, and so forth?

Dr. ALLISON. Well, it is a good question. Let me try to answer briefly. I think it is a remarkable fact for which we should all give thanks every day, and I do, that no tactical nuclear weapons, of which there were some 15,000 or 17,000 spread across the former Soviet Union, came loose, and found their ways into the international arms bazaars.

I do not believe that would have happened without Nunn-Lugar, which is part of the reason why I am such a great fan of what Senator Lugar and Senator Nunn did. It would have also not have happened without a good appreciation by the Russian military and Russian security services of their own self-interest.

If this was something they were doing for us as a favor, this would be one subject, but as Senator Lugar said, one of the nice features of this is that you are building on a foundation, a bedrock of genuine common interests, because as I explain to Russian colleagues every time I see them, which is almost every other day, the first target for a tactical nuclear weapon in the hand of a Chechyan is not New York, and it is not Washington. It is Moscow; it is Petersburg; it is right there at home. So that has been, I think, a great accomplishment.

Second, I think, without Nunn-Lugar, you would not have seen four strategic nuclear arsenals, Russia, Ukraine, Kazakhstan, and Belarus—shrink to one. So all the weapons, more than 2,000 weapons or missiles that were aimed at the United States are now completely gone. So all that is back in Russia. So that is the good news.

The bad news is that over the last decade as we have watched this story, Russia has become more chaotic, more criminalized, more corrupted. So I still regard it as a remarkable fact every day that professionals who are in this system, and who sometimes do not have their pay provided for some period of time, and two or three of them, if they got together, could successfully steal this material, have so far not—that it has not happened.

So I would say we can give thanks for what has been accomplished. We can look at what we have learned in this initial period.

But the reason why I think there is an urgency for getting on with the job now is that tomorrow you could see a rupture after which we might say, "Well, this was inevitable. There was not much we could do," whereas, in fact, I think that actually, given the mentality now, the recognition of the problem, and all that has been learned in the work of Nunn-Lugar to this period, it is timely for a plan to get the job finished.

Senator NELSON. Mr. Chairman, let me just express my appreciation, also, for the leadership that you, and Sam Nunn, and Joe Biden took on in this early in the nineties. Now, this magnificent creature that you have created has to be fueled with additional fuel, so let us go do it.

Thank you, Mr. Chairman.

Senator LUGAR. An excellent sentiment. I really appreciate that very much, because as Senator Biden and I were just discussing, it is wonderful to have new allies, and you are one, Senator Nelson, and we appreciate that.

Let me just thank both of you very, very much for your work on this Commission, and for your work throughout the years, as distinguished public servants, as genuine thinkers, inside and "outside the box," or wherever you were doing this thinking, because you have enriched our hearing today and our understanding and I think our resolve to move ahead.

Senator BIDEN. Mr. Chairman, before you close, could I ask unanimous consent that the letter from the members of the Task Force, Baker, McClure, Butler Derrick, David Boren, Sam Nunn, Lee Hamilton, Gary Hart, Alan Simpson, et cetera, be entered into the record?

Senator LUGAR. Yes, indeed.

[The letter referred to follows:]

JANUARY 18, 2001.

The Honorable JOSEPH R. BIDEN JR.
United States Senate,
221 Russell Senate Office Building,
Washington, DC.

DEAR SENATOR BIDEN:

The condition of nuclear materials, weapons and scientists in Russia presents an urgent risk to national security.

We are writing as a result of our just-concluded work as members of a bipartisan task force, commissioned by Secretary Bill Richardson, which examined the Department of Energy's nonproliferation programs in Russia. A copy of our final report, "A Report Card on the Department of Energy's Nonproliferation Programs With Russia," is enclosed. Our findings confirm that Russia's current inability to secure nuclear material and technical talent presents rogue nations and other bad actors with an unprecedented opportunity to steal or buy nuclear materials and technology.

No one in our bipartisan group dissented from the conclusion that *the current U.S. nonproliferation programs are inadequate to meet the threat of proliferation of nuclear materials and expertise.*

U.S. government programs have achieved some remarkable successes, but continuing at current levels won't get the job done quickly enough. Therefore, we recommend heightened attention to this issue, increased funding for these nonproliferation programs, including increased allied funding and participation, and formulation of a coordinated government-wide strategic plan to secure and neutralize this nuclear material and expertise.

Sustained support from Congress is an essential prerequisite to success in this endeavor. We urge you to work with the new President to strengthen the U.S. nonproliferation effort. Your efforts will make a major contribution to world security and will mean a great deal to the dedicated staff who keep these programs running.

Thank you for your consideration.

Sincerely,

HOWARD BAKER.
DAVID BOREN.
GARY HART.
JAMES MCCLURE.
SAM NUNN.
ALAN SIMPSON.
BUTLER DERRICK.
LEE HAMILTON.
DAVID SKAGGS.

Senator BIDEN. As well Mr. Chairman, I am asking your permission and permission of the witnesses for some of us to submit—and

I will not burden you with a lot of questions—but several questions about two areas.

I would like you, if you would, to think about what it is that you can criticize most in the existing programs, and where their shortfalls are. Because I do not think we should go into this in a way that says, "Everything is wonderful the way it is, and no need to change"; and second, if you would be willing to expand on where the economic interests and the strategic interests butt heads most often. It would be useful for me to educate myself, but also for us to educate our colleagues on this issue.

Senator LUGAR. I would certainly encourage the witnesses to respond, if you would. You have given us a number of practical examples from your experience. That is why the questions are especially relevant, because you have had to work with the bureaucracy, in addition to your own idealism, and that would be helpful to this committee, and to all others who are interested in pursuing this.

We thank you very much. The hearing is adjourned.

Senator BIDEN. Thank you, gentlemen.

[Whereupon, at 12:15 p.m., the hearing was adjourned.]

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