

**Testimony of Linton F. Brooks
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Good morning, and thank you, Madame Chairwoman, for the opportunity to come before the Subcommittee on Emerging Threats and Capabilities of the Senate Armed Services Committee to discuss the Department of Energy's National Nuclear Security Administration's (NNSA) nuclear nonproliferation programs. This is my first opportunity to address this Committee since assuming my responsibilities as the Deputy Administrator for Defense Nuclear Nonproliferation. Before addressing our specific programs, I want to say how important I consider this Committee's contribution as the United States works to establish sound approaches to stemming the spread of nuclear weapons, materials, technology, and expertise. I appreciate the Committee's support and I look forward to continuing working together in the future.

For all Americans, the events of September 11 were a rude awakening. The attacks forced the United States to come to grips with its own vulnerability. Americans now have to accept just how dramatically the threat has changed. At this somber moment, there is some reason for optimism. The good news is that the Cold War is over; President Bush has been masterful in moving this nation beyond that conflict once and for all, and establishing a new, cooperative relationship with Russia. As the President has said, "We're transforming our relationship from one of hostility and suspicion to one based on cooperation and trust, that will enhance opportunities for peace and progress for our citizens and for our people all around the world...Russia and America share the same threat and the same resolve."

As we transform our relationship, there are few better examples of our success than our cooperative nonproliferation programs with Russia. Here we have benefited from the support and leadership of the Secretary of Energy, Spencer Abraham. No one has been more energetic and dedicated than Secretary Abraham in putting into action the

President's vision. He has established a strong partnership with his counterpart, Russia's Minister of Atomic Energy Alexander Rumyantsev. Shortly after the Crawford summit, the Secretary and Minister Rumyantsev agreed to accelerate our material protection efforts in Russia, to work together to foster international cooperation in protecting nuclear material and enhance the international nuclear weapons nonproliferation regime, and to establish a process to ensure that their subordinates followed up on their decisions.

As a result of the Secretary's efforts, our Material Protection, Control, and Accounting program has been accelerated, and we're enjoying unprecedented access in Russia – better than we've ever experienced. And the Department has also been in the forefront of international efforts to improve the physical protection of nuclear materials. Since September 11, the Secretary has addressed the International Atomic Energy Agency twice – including an unprecedented appearance before the IAEA's Board of Governors. We are fortunate to have the strong support of both the Secretary and NNSA Administrator General Gordon.

So I feel confident about where our relationship with Russia is headed. But President Bush had it right: Even with the collapse of the Soviet empire, the United States is hardly "out of the woods." We need to be concerned about the new threats our country faces -- nations acquiring nuclear weapons technologies, as well as terrorist networks and entities that will apparently stop at nothing in their pursuit of weapons of mass destruction. These are threats that are immediate and, in many ways, more dangerous than what the United States experienced in the past. The terrorists with whom we are at war do not appear to perceive the same constraints that Russia demonstrated during the Cold War. Their wanton disregard for the value of human life has been amply demonstrated. They are prepared, in fact determined, to use the most destructive weapons available to them – deterrence is not yet a word in their vocabularies.

As the Deputy Administrator for Defense Nuclear Nonproliferation, the events of September 11 have given this discussion a very real and immediate meaning. As the NNSA develops and implements its non-proliferation activities, we've also had to think

hard about how counter-terrorism activities are integrated into what we do. In some ways, there are strong correlations; in other ways, the linkages are not as immediately clear, but there nonetheless.

The problem that we confront – at the heart of the relationship between our nonproliferation and counter-terrorism concerns, is two-sided -- it has a supply and demand side component. There are now any number of actors – so called “rogue” states, as well as terrorist organizations – that are seeking somehow to attain weapons of mass destruction capabilities and expertise. The international community sees a crisis in the fact that accelerated measures are needed to improve the physical protection of nuclear materials worldwide, to improve control and accounting over this material, and to strengthen export controls and prevent illegal trafficking and handling of nuclear materials. But these rogue actors view this crisis as an opportunity.

In Russia and elsewhere, enormous strides have been made in securing this material. But the fact remains that the theft of only a few kilograms of Highly Enriched Uranium (HEU) or plutonium , the deadly ingredients needed to fashion a nuclear device, would be enough for a weapon. And this under-secured material – the supply side of the problem – is just too tempting a potential target of opportunity for those who would seek to use it against the civilized world. Indeed, the IAEA reports that in the last decade alone, there have been almost 200 attempts to illicitly acquire such material, and that’s just the known cases.

So these are the risks that our programs are trying to address. The prospect that weapon-usable material could be stolen or sold to terrorists or hostile nation states, and used against American citizens is a clear and present danger that cannot be underestimated.

NNSA is working hard to reduce this threat. Our programs are key elements to U.S. efforts to reduce terrorist threats, while denying opportunities for rogue actors to acquire materials that can make weapons of mass destruction. These programs are

designed to detect the proliferation of weapons of mass destruction worldwide; prevent the spread of weapons of mass destruction (WMD) material, technology, and expertise; and reverse the proliferation of weapons of mass destruction, while at the same time improving nuclear safety and security worldwide. We pursue these objectives through technology research and development; promotion of international nonproliferation and security objectives and nuclear safety; and our non-proliferation programs with Russia.

Before I turn to specific details, let me make one overriding point. There was concern on the part of some last year that the Administration was not committed to non-proliferation. I believe that critics confused prudent review of programs with lack of interest. In any event, the budget before you – which is 36 percent about the last budget of the previous Administration – should resolve any lingering doubts of the seriousness with which we are approaching these important issues.

Technology Research and Development

NNSA nonproliferation and verification research and development initiatives advance the U.S. ability to detect proliferation, monitor for nuclear explosions, develop biological and chemical response technologies, and conduct demonstrations that will help find the means to detect potential threats to national security more quickly.

As this description indicates, the charter for our R&D work goes beyond nuclear nonproliferation and includes important work in areas such as biological and chemical detection. Over the past year, for example, NNSA deployed a prototype biological agent detection system used at the Winter Olympics, demonstrated a prototype chemical agent detection and response system in the Washington Metro, began to operate a new generation of nuclear detonation detection sensors on GPS satellites, and continued to demonstrate highly accurate thermometry from space, with the DOE Multispectral Thermal Imager satellite that was launched in March of 2000.

Looking ahead, our research and development programs will emphasize efforts that will produce direct near-term applications that can be fielded in two years or less. Our request of \$283,407,000 will allow us to advance our efforts to develop and test technologies for detecting terrorist and proliferation activities involving WMD and transition those capabilities to responsible user agencies; perform increased DNA sequencing and assay development for an increased number of biological agents, and develop the concomitant detection capabilities, improve existing detection capabilities and response times for a wide range of chemical threat agents; and improve the sensitivities of nuclear explosion monitoring capabilities.

International Nonproliferation Programs: A Fresh Look

As you likely know, the Administration recently completed a comprehensive and detailed review of its nuclear nonproliferation programs with Russia. This review was exhaustive and took some months to complete; we felt it important to take the time necessary to do it right, and to ensure that these programs were thoroughly considered for their continued usefulness and viability.

I could not be more pleased with the outcome of that review, which reaffirmed the fundamental importance of our programs and concluded that most U.S. programs to assist Russia work well, are focused on priority tasks, and are well managed. The review recommended expansion of some programs, adjustment of others, and in some cases, consolidation. We are actively engaged in implementing the recommendations of that Review. To highlight a few areas of interest:

The International Nuclear Materials Protection and Cooperation program is already a success story and gives us much to build upon. The program provides high payoff, low-tech solutions to the pressing problem of under-secured nuclear materials in Russia. Security upgrades have been completed or are underway on about a third of the estimated 600 metric tons of Russia's weapons-usable material; hundreds of trucks and railcars have been made more secure through hardening and other measures; steps are

being taken to consolidate nuclear material at fewer locations, reducing its vulnerability to theft or sabotage; and our experts are working with their Russian counterparts to more effectively respond to any terrorist threat.

With full funding of our request, NNSA will complete this program by 2008 – two years ahead of schedule. NNSA will work to accelerate the rapid and comprehensive security upgrades on at-risk plutonium, highly enriched uranium, and naval nuclear weapons at over 40 Russian Navy sites. This is real threat reduction.

We are planning to complete the transition of the Material Consolidation and Conversion Pilot Project to a full-scale program. Under that program, which has already converted 1.2 MT of HEU to low-enriched uranium (LEU), we hope in FY 2003 to eliminate an additional 2.9 metric tons of HEU the same way. We will also work to harden an additional 70 trucks and 9 railcars, in order to reduce their vulnerability to attack or sabotage.

In related efforts, NNSA will accelerate the Second Line of Defense program, installing radiation detection equipment at 21 additional strategic transit and border sites in Russia and Ukraine, and Kazakhstan.

The FY 2003 budget requests \$39.3 million to fund NNSA programs to prevent the adverse migration of WMD expertise from the former Soviet Republics. The Nuclear Cities Initiative has been refocused and consolidated with its highly successful sister program, the Initiatives for Proliferation Prevention, under a new program called Russian Transition Initiatives. The two programs share a common senior manager, and both now focus on projects with commercial applications. Last year, IPP successfully garnered an additional \$56 million in private investment funding to further augment its technology commercialization efforts. No other nonproliferation program in the US Government has been as successful attracting private equity funds to help commercialize its own efforts.

By finding commercial, peaceful employment for former Russian weapons scientists, we not only create commercial opportunities for U.S. industry, but we also dramatically reduce the talent pool available to those states that would employ those individuals for their own evil ends.

These scientists are involved in any number of programs that will play a big role in how we address today's threats. Needle-free injector systems for mass inoculations; light-weight radiation detectors to detect smuggling of nuclear materials; and other innovative projects will have direct relevance to our counter-terrorism efforts – what a tremendous resource to have on our side, as we seek innovative solutions to the threats that confront us today.

NCI also had a highly successful year. It negotiated a written commitment from the Russian Ministry of Atomic Energy (MINATOM) to end nuclear weapons work at the Avangard plant by the end of 2003, and successfully negotiated and signed an access arrangement with MINATOM to regulate the terms of access to closed nuclear cities. This arrangement should provide a significant impetus to NCI efforts. Indeed, it is fair to say that NNSA is in its strongest position it has ever enjoyed, with respect to the access we stand to gain and our ability to facilitate the downsizing of Russia's nuclear complex.

As part of its Review, the Administration has decided to transfer from the Department of Defense to the Department of Energy responsibility for the elimination of weapons-grade plutonium production in Russia. This will lead to the eventual shutdown of reactors in Russia that are still producing plutonium, and the provision of required heating and electricity for the local communities with fossil fuel plants. Beginning with the FY 03 request, DOE will assume responsibility for obtaining the required funding and for accomplishing this important nonproliferation objective by the end of 2007. We believe it is important to move forward with this, through the transfer and use of the DoD un-obligated prior year balances in the amount of \$74 million. We will need legislative help on this, as well as with removing restrictions against the use of this money for the construction of the fossil fuel plants.

Our Nonproliferation and International Security request of \$93 million is essential to help attack the demand as well as the supply side of the proliferation problem. This includes our efforts to address under-secured nuclear materials worldwide, provide opportunities for regional security programs that may help to reduce proliferation incentives, support the International Atomic Energy Agency, and strengthen international nonproliferation programs. It will support NNSA efforts to develop capabilities to help monitor warhead dismantlement efforts in Russia, and develop lab-to-lab contacts with Russia to support U.S. counter-terrorism efforts. This budget funds efforts to accelerate work with known and emerging nuclear suppliers to control the export of dual-use and nuclear technologies, and to provide support for work to improve foreign regulatory, legal, and industrial-level export control systems.

The FY 2003 request would fully fund the program to dispose of surplus U.S. weapons-grade plutonium through the irradiation of mixed oxide (MOX) fuel in commercial nuclear reactors. This reflects an important decision of the Bush Administration: After considerable study, we have reaffirmed our commitment to dispose of 34 metric tons of U.S. surplus weapons-grade plutonium, while an equal amount is disposed of in Russia. The United States will turn this material into mixed oxide, or MOX, fuel, for use in commercial nuclear reactors.

Some challenged this program because of the cost of U.S. disposal. By revising our plans to focus exclusively on MOX (thus dropping the companion immobilization program proposed by the previous Administration), we've scaled back the cost for U.S. disposal to \$3.8 billion over twenty years, a savings of almost \$2 billion over the life of the program. We've also reduced peak year funding, accelerated the completion of the program by three years and reduced technical risk. The United States is also working with other countries to provide assistance to Russia in meeting its obligations.

As a result of these efforts, Russia will eliminate enough plutonium to make over 4200 nuclear weapons. We are working closely with Russia to improve the efficiency of

Russia's program, and we are working with our allies to secure adequate international support.

Conclusion

It's now impossible to separate nonproliferation and counter-terrorism concerns, and I hope it is clear from my comments today that NNSA understands how the threat has evolved, and is taking proactive steps to address it.

With the end of the Cold War, all Americans have had to re-think their concepts of security – including nuclear security. For me personally, I have come to the conclusion that security from proliferation and terrorist threat is only attainable if we attack the problem on many fronts, from many directions. The U.S. needs to cut off the supply of dangerous materials, as our programs to improve the security of weapons-usable material in Russia seek to do. We've got to reduce the demand, by reducing the motivation for proliferation and squashing the power centers of those that would want to harm us. We've got to make it more difficult for these materials to leave Russia and other places by tightening international borders, and we've got to tighten our own borders, as our programs carried out in conjunction with the Coast Guard seek to do.

This is a multi-faceted task, and it's not one that will be completed overnight. It will take a long, sustained effort. That's why I'm so honored to be in my current position, where I have the opportunity under General Gordon to help make progress on all these fronts. It will be difficult, but I have no doubt that we have the will and the determination to get the job done.

I hope I've given you a broad sense of our budget priorities, and I look forward to working with you over the coming year to advance our common interest in reducing proliferation threats.

I'll be happy to take your questions.