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Introduction

Thank you for this opportunity to discuss with you our efforts under the U.S. Department of Energy/National Nuclear Security Administration’s Global Threat Reduction Initiative, also known as GTRI. On May 26, 2004, then Secretary of Energy Abraham established GTRI. GTRI is a cooperative program to provide international support for countries’ national programs to identify, secure, recover or facilitate the disposition of vulnerable nuclear and radiological materials around the world that pose a potential threat to the

international community. The formation of GTRI consolidated a number of nonproliferation programs you may be familiar with that work together to minimize and, to the extent possible, eliminate the use of highly enriched uranium (HEU) in civil nuclear applications worldwide. In particular, the Office of Global Threat Reduction, which was set up to implement GTRI, has oversight of the Reduced Enrichment for Research and Test Reactors program, the Foreign Research Reactor Spent Nuclear Fuel Acceptance program, and the Russian Research Reactor Fuel Return program. This consolidation allows these three programs to work in concert to bring about the elimination of research reactor materials as a source of proliferation concern. In my speech to you today, I would like to take a moment to highlight the work that these programs have undertaken in cooperation with the global research reactor community. In addition, I would like to highlight the importance we place on fuel development under the RERTR program and also provide an update on the work we have and will be doing to support the U.S.-Russian Presidential Bratislava Summit Statement.

RERTR

The Reduced Enrichment for Research and Test Reactors program, also known as the RERTR program, works to convert research reactors and radioisotope production processes to the use of low enriched uranium (LEU) fuel and targets. The RERTR program has identified 105 research reactors around the globe, including in the United States, which the program will cooperate with reactor operators to convert. To accomplish this objective, the RERTR program supports the development of the high-density LEU fuels necessary for conversion, assists reactors with conversion analyses, and works to provide incentives for operators to convert to the use of LEU fuel. The RERTR program also is working to assist facilities in converting their processes for the production of molybdenum-99, a medical isotope, from the use of HEU to LEU targets. The program is working to ensure that reactors can be converted safely, without major modifications to the reactor structure or equipment, without an increase in the cost of operating the reactor, and without altering the scientific mission and function of the reactor.

I would like to stress that the United States recognizes that we cannot ask others to do what we are not prepared to do ourselves. Therefore, I am pleased to announce today the recent steps we have taken to begin the

conversion of two more of our domestic reactors in the United States. Specifically, DOE has begun the process of obtaining regulatory approval from the U.S. Nuclear Regulatory Commission for the conversion of the reactors located at the University of Florida and Texas A&M University, and the Department is in the process of negotiating contracts for the manufacture and shipment of replacement LEU fuel for these two facilities. The conversion of these U.S. university research reactors is a very important milestone in our effort to reduce the utilization of weapons useable nuclear material and highlights the high priority we place on this important nonproliferation objective. We have set an aggressive goal to complete conversion of all 105 targeted research reactors to LEU fuel by 2014 and I look to you, the international community of research reactor operators, for your continued support and collaboration.

RRRFR

The second nonproliferation program consolidated under the GTRI, the Russian Research Reactor Fuel Return (RRRFR) program, works to repatriate to Russia fresh and irradiated Russian-origin fuel from over 20 Soviet-/Russian-supplied research reactors in 17 countries. This trilateral initiative among the United States, the Russian Federation, and the

International Atomic Energy Agency (IAEA) works hand-in-hand with the RERTR program to ensure that eligible facilities that make their HEU fuel available for repatriation and agree to convert to LEU fuel may receive the necessary assistance. We hope to complete the repatriation of Russian-origin HEU by 2010 and look to some of you for your continued interaction and involvement in this program for the coming year.

I am pleased to report to you that RRRFR had a very successful year in 2004 and I would like to compliment our Russian colleagues for their efforts under this program. The United States and the Russian Federation signed a Government-to-Government Agreement, which provides the overall legal framework for implementation of the return of Soviet- or Russian-origin research reactor fuel to Russia for safe storage and disposition. This agreement is critical to our overall success in implementing the program. Additionally, RRRFR completed the shipment of 17 kilograms of fresh HEU fuel from Bulgaria, roughly 17 kilograms of fresh HEU from Libya, 3 kilograms of fresh HEU from Uzbekistan, and most recently in December, 6 kilograms of fresh HEU from the reactor in Rez, Czech Republic. In the balance of 2005, we hope to complete fresh HEU shipments from Latvia, the Czech Technical University, and the critical assembly in Libya. In addition,

we hope to begin our pilot shipment of spent HEU fuel from Uzbekistan, and pursue the purchase of high-capacity spent fuel casks to increase the amount of materials we can transport per shipment.

FRR SNF Acceptance

The Foreign Research Reactor Spent Nuclear Fuel (FRR SNF) Acceptance

program is the third research reactor program working to achieve the nonproliferation mission of GTRI. The FRR SNF Acceptance program supports the implementation of the U.S. HEU minimization policy by accepting certain types of eligible U.S.-origin HEU and LEU spent nuclear fuel and HEU target material. In November 2004, DOE approved a ten-year extension of this program to allow continued acceptance and management of eligible U.S.-origin material to be returned to the United States. Under the extension, the United States will accept eligible spent fuel that is irradiated by May 2016 and returned to the United States by May 2019, allowing more facilities to participate in the effort. Over the past year, we have repatriated 726 spent nuclear fuel assemblies from Japan, Indonesia, and Germany. In the remainder of 2005, we expect to complete shipments of spent nuclear fuel from several countries – some of whom have representatives attending this conference.

- *Gaps*

The RERTR, RRRFR, and FRR SNF Acceptance programs comprise DOE's pre-existing research reactor nonproliferation efforts. However, in order to more comprehensively address additional quantities of nuclear material, as part of the GTRI, DOE has developed a new program to address material not covered by existing programs; in essence filling the "gaps" of these programs. Under this new program, we will consider securing, removing or facilitating the final disposition of a variety of materials which could potentially include: U.S.-origin spent nuclear fuel not covered by the FRR SNF Acceptance program; U.S.-origin fresh HEU research reactor material not covered by the FRR SNF Acceptance program; U.S.-origin plutonium and plutonium-bearing material; HEU material of non-U.S.- and non-Russian-origin; and non-U.S.-origin HEU scrap materials. We are in the process of developing a comprehensive inventory of such materials and initiating the steps to complete the necessary environmental reviews to determine if it is possible to accept these materials in the United States. Your participation and support of this new, expanded effort is of critical importance. Like all our international nonproliferation efforts, we welcome your participation in this voluntary program. My staff or I are available

during this conference to discuss this new effort and the materials for consideration under this program. I look forward to your input.

It is clear that the success of these programs will depend heavily on collaboration with you, our global partners. It is in every nation's interest to avoid the possible catastrophic results of the use of a nuclear explosive device. I believe that GTRI is taking comprehensive steps to ensure that this does not happen.

Fuel Development

A very important element to many of the programs under GTRI is the technological development of higher-density fuels that will enable additional reactors to convert to LEU fuel, thereby removing HEU material from civilian applications. It is hoped that through continued interaction, the development of these fuels and the repatriation of HEU material from converted reactors, more weapons usable nuclear material will be protected against falling into the hands of those with malicious intent. This effort is the cornerstone of our nonproliferation objectives and the mission of GTRI.

High-Density Fuels

I would like to take this time to highlight GTRI's efforts on this matter. The development of higher-density fuel is necessary for the conversion of many of the remaining research reactors targeted under the RERTR program.

While there have been some setbacks in this effort with the failures of some of the U-Moly test fuel elements, we are in the process of evaluating these failures in order to gain a better understanding of the mechanisms at work that will eventually enable us to develop and qualify a more suitable fuel required for conversion. There are a number of both independent and collaborative efforts currently underway to address this very issue, including the International Fuel Development Working Group that will be meeting on the margins of this conference. I look forward to continued discussions on these issues during this conference. I am pleased to offer our full cooperation to the International Fuel Development Working Group.

I would like to highlight that due to the importance of continued progress in fuel development, GTRI has doubled the amount of funding in FY 05 for fuel development and will further increase funding for fuel development in FY 06.

U-Moly CRP

I would also like to take this opportunity to offer my strong support for the effort led by the IAEA to organize the Coordinated Research Project (CRP) called "Developing Techniques for Small Scale Indigenous Molybdenum 99 Production Using LEU Fission or Neutron Activation." A first meeting will take place in Argentina in May 2005. I hope that the major producers of Mo-99 will join the smaller-scale Mo-99 producers and participate in this important project.

The RERTR program hopes to continue working with the radioisotope production community to ensure that we maintain the scientific and economic benefits of Moly-99 production, while at the same time enabling us to address our mutual nonproliferation objectives.

Bratislava Meeting

As one last illustration of the importance of our efforts, and to highlight the need for expanded cooperation between the international partners, I would like to discuss the outcome of the recent summit between Russian President Putin and U.S. President Bush.

As you are aware, President Bush and Putin met in February in Bratislava, Slovakia, to focus much needed attention on intensifying cooperative efforts to enhance nuclear security around the globe. Cooperation with Russia has naturally been a first-order priority. However, as both Presidents pointed out, there is increasing importance on engaging the broader international community to address the potential threat posed by nuclear and other radiological material located at facilities around the globe.

The Joint Presidential Statement following this meeting outlined a number of potential areas where we need to deepen cooperation in addressing the security of nuclear material in Russia and around the world. Specifically, the statement highlighted research reactors and the work undertaken by GTRI.

Presidents Bush and Putin called for the development of a plan for joint work to develop low enriched uranium fuel for use in any U.S.- and Russian-designed research reactors in third countries now using HEU fuel, as well as the establishment of a prioritized timeline for returning fresh and spent fuel from U.S. and Russian research reactors in third countries.

While progress is already being made in many of these areas, the process launched at Bratislava called further attention to a number of critical global nonproliferation goals and has invigorated efforts to minimize and eventually eliminate the use of HEU in research reactors worldwide. To this end, we will be meeting in Moscow later this week for the first Joint Coordinating Committee for the Russian Research Reactor Fuel Return program and also meeting with our Russian colleagues to coordinate efforts under the RERTR program.

Conclusion

In closing, I would like to thank you for this opportunity to discuss these programs with you. I welcome the chance to highlight the efforts DOE is taking to address the threat of nuclear proliferation and we look forward to working closely with you to continue this important work.