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Introduction

Senator Casey, Senator Lugar and members of the Committee, thank you for the opportunity to testify at this hearing on "Safeguarding the Atom: Nuclear Energy and Nonproliferation Challenges." In his speech at the National Defense University in February, 2004, President Bush highlighted the importance of nuclear nonproliferation for American security in the post-9/11 world. He described how the subjects of this hearing – strengthened IAEA safeguards and assurance of reliable fuel supplies – support our nonproliferation policies. "We must," the President stated, "ensure that the IAEA has all the tools it needs to fulfill its essential mandate." At the same time he called for the creation of "a safe, orderly system to field civilian nuclear plants without adding to the danger of weapons proliferation." To this end, he proposed that "the world's leading nuclear exporters should ensure that states have reliable access at reasonable cost to fuel for civilian reactors, so long as those states renounce enrichment and reprocessing. Enrichment and reprocessing are not necessary for nations seeking to harness nuclear energy for peaceful purposes."

Since the time of that speech, the promotion of these measures has been an important part of our nonproliferation policies. The bill that is the focus of this hearing, S. 1138, the "Nuclear Safeguards and Supply Act of 2007," also seeks to advance these goals. In particular I would call attention to the "declaration of new policy" in Section 102(b) of the bill, which reads:– "It shall be the policy of the United States to discourage the development of enrichment and reprocessing capabilities in additional countries, encourage the creation of bilateral and multilateral assurances of nuclear fuel supply, and ensure that all supply mechanisms operate in strict accordance with the IAEA safeguards system and do not result in any additional unmet verification burdens for the system." We are actively pursuing these goals through diplomacy and under existing constitutional and statutory authority. We have already undertaken important measures to strengthen the IAEA safeguards and develop reliable fuel supply mechanisms.

IAEA Safeguards

As pointed out in S. 1138, the array of challenges facing the IAEA safeguards system in recent years is likely to continue and require more safeguards resources in the future.

First, the IAEA has been conducting prolonged and intensive investigations dealing with non-compliance which it must undertake with high priority; the circumstances in Iran and now, once again, with the DPRK are well known to you.

Second, the number and size of declared nuclear activities under safeguards agreements continue to grow. The agency is required by legally-binding safeguards agreements to perform most of these activities. In the short term, the IAEA is being asked to safeguard large new fuel cycle facilities in Japan, and we also expect growth in safeguards activities in new areas, such as India.

In the longer term, as pointed out in S. 1138, there is renewed interest world-wide in nuclear energy as an important component of the world's energy supply, and the number and size of nuclear facilities around the world will continue to grow, and likely accelerate.

Third, the recent efforts to strengthen safeguards require new safeguards activities. As more states bring safeguards agreements and Additional

Protocols into force, or adhere to strengthened versions of safeguards agreements, the Agency's workload increases.

Fourth, new safeguards activities require efficient, effective and state of the art technological, methodological, information and communication infrastructure in support of its verification regime. Some of this infrastructure is provided in the Agency's regular budget; however, the IAEA must rely on voluntary contributions from donor states to purchase other equipment and services to carry out its verification function.

To address these challenges the IAEA relies on funding from its regular budget and voluntary contributions. The United States has consistently been a strong supporter of the IAEA, and its verification activities in particular. However, the distribution of regular budget funding between verification activities and other Agency activities is often a source of contention, with many developing member states relentlessly arguing that more resources should be allocated for technical cooperation.

In 2003, a U.S. initiative resulted in an increase in the Agency's regular budget of approximately 20%, spread out over the last few years. Much of this increase was allocated toward safeguards.

For 2008-2009, the Agency requested an 8.5% increase in its regular budget. About a quarter of this increase was for safeguards, and over half of the remaining amount was for expenses (such as computer systems) that support all IAEA activities. However, the Board of Governors agreed to a 4.2% increase for 2008-2009, but this amounts to just 1.4% of which is real growth in the Agency's budget.

Given the constraints in the regular budget, a significant portion of the Agency's safeguards budget is derived from voluntary contributions. The United States is by far the largest contributor; this year we are providing $53 million in voluntary contributions, including about $21 million for safeguards. The safeguards contribution includes $14 million for the U.S. Program of Technical Assistance to IAEA Safeguards – POTAS – and funding for sample analysis and safeguards equipment. There is also about $3 million to be used, as needed, in the DPRK.

It is likely the Agency will face challenges with regard to finding adequate resources in the future. The IAEA Director General noted in a June statement that he believes that "…the Agency remains under-funded in many critical areas, a situation which, if it remains unaddressed, will lead to a steady erosion of our ability to perform key functions, including in the verification and safety fields. To this end and … to remedy this unsustainable situation, I have initiated a study to examine the programmatic and budgetary requirements of the Agency over the next decade or so." A solution to the long-term funding question will necessarily involve technical, institutional and political elements.

Reliable Fuel Supply

Turning from support for IAEA safeguards to the promotion of reliable fuel supply, the Administration has also used existing authority to actively pursue the development of fuel supply mechanisms for countries that forego enrichment and reprocessing. The role of fuel supply mechanisms in nonproliferation policy was succinctly stated by IAEA Director General Mohamed ElBaradei as follows: "By providing reliable access to…fuel at competitive market prices, we remove the incentive for countries to develop

indigenous fuel cycle capabilities…and [address] concerns about dissemination of sensitive fuel cycle technologies."

U.S. Actions

As noted in Section 203(2) of S 1138, in 2005 the United States announced plans to downblend 17.4 metric tons of highly enriched uranium excess to our defense needs to establish a reserve in support of fuel supply assurances. This amount of HEU will produce about 290 metric tons of low enriched uranium, and at current market prices is valued at over $1 billion dollars. This was followed in 2006 by several major fuel supply initiatives. On May 31 of that year, the United States, France, Russia, Germany, the Netherlands and the United Kingdom submitted to the IAEA a concept for reliable access to nuclear fuel. Under this six-country proposal, the IAEA would have a key role in facilitating new commercial arrangements if a country should find its fuel supply interrupted for reasons other than failure to comply with its nonproliferation obligations. As a last resort, reserves of nuclear fuel, held nationally or by the IAEA, could act as a back-up mechanism. Eligibility to receive fuel supply would be based, among other things, on a country's record of compliance with IAEA safeguards, its acceptance of international

nuclear safety standards, and its reliance on the international market rather than on indigenous sensitive fuel cycle activities.

In the fall of 2006, the United States participated in an IAEA "Special Event" on fuel supply assurances in Vienna. At that event, as noted in Section 203(3) of S 1138, the Nuclear Threat Initiative announced plans to contribute $50 million to the IAEA to help create a low enriched uranium stockpile owned and managed by the IAEA, but made it contingent on matching funds of $100 million in funding or an equivalent value of LEU from other sources. The United States supports this proposal to create an LEU stockpile administered by the IAEA.

To address fuel assurances over the longer term, in February 2006 the United States announced the Global Nuclear Energy Partnership, or GNEP. Under GNEP, the United States, with other partner nations, would develop advanced nuclear fuel technologies that will result in less waste, more energy without pollution or greenhouse gas emissions, and reduced risk of proliferation. When these technologies are fully deployed, states with advanced fuel cycle capabilities would join together to provide comprehensive, reliable fuel services to countries that choose not to pursue

enrichment and reprocessing, to ensure the availability of fuel, and a commitment to take back spent fuel.

Earlier this month, on July 3, President Bush and President Putin of Russia issued a Joint Declaration on Nuclear Energy and Nonproliferation. Under the Joint Initiative, the United States and Russia will work together with other nuclear supplier states to develop mutually beneficial approaches for states considering nuclear energy, including the provision of reliable nuclear fuel services.

S. 1138

I would like to focus the remainder of my comments more narrowly on the text of S. 1138. Let me begin by noting once again that the overall objectives of this bill – to enhance nuclear safeguards and to provide assurances of nuclear fuel supply to countries that forgo certain fuel cycle activities – comport well with the policy objectives that the Administration is seeking to achieve. However, some individual provisions raise issues which we believe could make it more difficult to achieve these objectives. My comments are offered with the intention of further improving this legislation.

We agree generally with the various assessments in Section 101 identifying challenges facing the IAEA's safeguards regime. The United States and the IAEA are working to strengthen safeguards by seeking universal adherence to the Additional Protocol and by upgrading the Small Quantities Protocols. We welcome the attention given to the IAEA's human capital problems, an area we have repeatedly raised with the Agency. This is a concern not only for the operation of the Safeguards Analytical Laboratory, or SAL, in Seibersdorf, Austria, but more generally for the IAEA Safeguards Department as a whole.

Turning to Section 103 of the bill, we agree that there is a need for carefully considered upgrades to SAL. It is not clear, however, that expending the full $10 million solely on the refurbishment or replacement of SAL, as proposed by Section 103(a), would be the most effective way to strengthen the IAEA's analytical capabilities. In November 2006, the IAEA held a workshop at SAL, attended by laboratory experts from member states, to determine what should be done to ensure that SAL would be able to continue to perform its mission. These experts generally agreed that while some infrastructure upgrades were needed, and the possibility of expansion should

be considered, there was no pressing need for an entirely new laboratory. U.S. experts believe that the biggest threat to SAL's analytical capabilities is not the age of the equipment, which, if properly maintained, can have a long service life. Rather, it is the availability of qualified staff to run the machines and interpret the results, a problem also identified in Section 101(13). We also understand that the Director General of the IAEA has set up a committee to further review the need for improvements at SAL. We therefore suggest the funds be targeted more flexibly, to address not just the refurbishment of SAL, but also to meet other IAEA safeguards equipment and personnel needs.

I would note with regard to Section 104 of the bill, that the U.S. Program of Technical Assistance to IAEA Safeguards, or POTAS, is a well-established program, by far the strongest in the world, supporting the technical implementation of IAEA safeguards and safeguard-related R&D. The current level of sophistication of IAEA safeguards is due in no small part to the contributions made by the U.S. support program over approximately 30 years. We fully agree with the objectives indicated in that section and the need for a strong U.S. technology base. This is of fundamental importance

to continuing U.S. leadership and the credibility of the IAEA safeguards system.

S.1138: Title II

As a general matter, we welcome the support for our efforts to establish reliable nuclear fuel supply mechanisms provided by Title II. We also welcome the support in Section 203 for the concept of an international fuel bank involving the IAEA. However, we believe that Title II should instead be drafted as a resolution expressing the Sense of Congress, or as Statements of Policy, because, as section 201(c) makes clear, this legislation is not intended to provide any authority additional to that under the Atomic Energy Act or other preexisting laws and regulations. The President already has the authority to work both bilaterally and multilaterally toward achieving such mechanisms, and such efforts are well underway.

In our discussions at the IAEA and elsewhere, we have found that other countries are deeply sensitive to whether a fuel supply mechanism will impose actual or apparent limitations on their sovereignty. Avoiding the appearance of such limits will be important in determining whether or not a supply mechanism will be widely accepted. Section 201(a) of the bill

acknowledges the importance of honoring national sovereignty by stating that fuel supply mechanisms should be open to states that "decide" to forego enrichment and reprocessing.

However, Section 201(b) describes several factors that, if incorporated into legislation on fuel supply mechanisms, will almost certainly be perceived as an effort to erode the sovereignty of potential recipients. For example, it is unclear whether section 201(b)(7) contemplates that all the legal restrictions on retransfer of US-origin nuclear material should apply to transfers of foreign-origin nuclear material funded in whole or in part by United States contribution. If this is the intent of the provision, consideration of this factor may make it more difficult, as a practical matter, for the United States to financially support an IAEA fuel bank as proposed by the Nuclear Threat Initiative in 2006.

Moreover, section 201(b)(9) provides that the supply mechanism should take into account whether potential recipients have export controls "comparable" to our own. Section 201(b)(10) provides the mechanism to should take into account the "conformity" of the recipient State's safety and regulatory regimes with similar U.S. laws and regulations. Legislation containing these

or similar provisions would likely be seen by other States as an unacceptable attempt to impose our domestic standards, rather than internationally accepted standards, and may ultimately be counterproductive to our efforts.

The required "Report on the Establishment on an International Fuel Authority" in Section 202(a) can make an important contribution to the discussion of nuclear fuel supply assurances. The issues identified as requiring evaluation in Section 202(b) are important ones. However, producing a solid and credible Report will require significant time and resources, both financial and personnel. We are frankly concerned about our ability to produce a quality report in the timeframe specified in Section 202(a).

At the June meeting of the IAEA Board of Governors, the Secretariat provided members of the Board with a draft report on fuel supply mechanisms and the potential role of the IAEA. This report will be discussed and debated at subsequent meetings of the Board. The 180 day deadline in Section 202(a) may not be long enough for the report to Congress to take account of the debate and decisions of the Board on fuel

supply. We suggest that a deadline of 365 days, with a brief progress report after 180 days, might be a more realistic time frame.

Conclusion

Let me conclude by emphasizing once again the importance of nuclear nonproliferation policy for the security of the United States. Both strong IAEA safeguards and the creation of reliable fuel supply mechanisms can make an effective contribution to preventing the spread of nuclear weapons. The potential of the latter was highlighted by President Bush in 2004, and every U.S. administration since the founding of the IAEA has supported strong IAEA safeguards. We welcome the support for these policies reflected in S 1138.