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"PROMOTING GLOBAL BEST PRACTICES"

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It's an honor to address the premier international professional society for nuclear materials management. My talk today is a simple appeal to all of you to play a larger role in the world's number one security imperative – keeping nuclear weapons out of terrorist hands.

This is the most significant, clear and present danger to global security, and there is a dangerous gap between the threat and our response.

For more than four years now, the organization I serve as President, the Nuclear Threat Initiative, has worked to help close that gap between the threat and the response – and reduce the chance weapons of mass destruction will ever be used by anyone, anywhere, whether by intent or accident.

We pursue this goal by serving as a catalyst for new thinking, by encouraging governments to act and transform public policy, and by developing start-up programs that we hope governments and the private sector will replicate on a larger scale.

There is a special advantage we bring to our work, and it is an advantage we share with your organization and all non-governmental entities: although we act with full transparency to our government, we can act without the regulatory restrictions and policy constraints of government. This ability, I believe, is key to an important new approach we need to bring to preventing nuclear terrorism. It's this approach I will be urging you to examine, advocate, and perhaps take on as your own.

The Heritage of INMM

In reviewing the history of your organization, I was struck by a New York Times Magazine article from 1973 discussing a threat that most citizens today consider only a recent development – the possibility that terrorists could acquire nuclear materials and make a bomb.

In those days, they were afraid that terrorists would use the bomb to blackmail governments; these days, we fear they wouldn't bother with blackmail.

The writer of the article, a nuclear physicist, quotes approvingly from a report done by (quote) "a professional society of nuclear experts who became concerned about the adequacy of the AEC's safeguards."

The group, of course, was the Institute of Nuclear Materials Management. The article said: "In a candid manner, untypical of professional societies, a May 15, 1970 report singled out transportation as the weakest link in the chain of security enveloping nuclear materials."

The article then quotes directly from the report, as follows:

"As a professional society, the Institute of Nuclear Materials Management can do no less than follow objectively where professional responsibility and logic lead. When logic applied by calm and reasonable men leads to alarm, as in the matter of safeguards for nuclear materials in transportation, then the Institute must be alarmist."

You can tell something about the heart and spirit of an organization from its history, and this article makes it clear that, at a time of concern in the United States about nuclear materials security, your organization was a leader in offering a blunt assessment of the facts and the risks.

The Institute of Nuclear Materials Management played an important role in making our nation more secure against the terrorist nuclear threat in the 1970s. It has an even higher obligation to do the same now.

The Greatest Threat

The chair of the 9/11 Commission Thomas Kean recently said: "A nuclear weapon in the hands of a terrorist is the single greatest threat that faces our country today."

Commission Vice Chair Lee Hamilton has said: "You have to elevate this problem above all other problems of national security, because it represents the greatest threat to the American people."

Why are the Chair and the Vice Chair of the 9/11 Commission so completely convinced that nuclear terrorism is our greatest threat? Let me answer with four quick points – enumerated in their report.

1. Al Qaeda has been seeking nuclear weapons for ten years.
2. The nuclear material they need is housed in hundreds of sites around the globe.
3. If they get that material, we have to assume they can build a nuclear weapon.
4. If they build a nuclear weapon, we have to assume they will use it.

The Right Response

The most effective, least expensive way to prevent nuclear terrorism is to secure nuclear weapons and materials at the source. Acquiring weapons and materials is the hardest step for the terrorists to take, and the easiest step for us to stop. By contrast, every subsequent step in the process – building the bomb, transporting it, and detonating it – is easier for the terrorists to take, and harder for us to stop.

Therefore, the defense against catastrophic terrorism must begin with securing weapons and fissile materials in every country and every facility that has them – to keep them out of terrorist hands. No nuclear material, no nuclear weapon. No nuclear weapon, no nuclear terrorism.

That is a simple formula, but a complicated endeavor. There are nuclear materials in a large number of countries. Terrorists trying to steal nuclear materials won't necessarily go where there is the most material; they will go where the material is most vulnerable. Our security, therefore, is only as strong as the weakest link in the security chain.

In the post-9/11 world, each nation has a supreme national interest in making sure every other nation secures its nuclear materials to the highest practicable standards. That interest is not being met, and it will not be met until there is wider understanding of the urgency and greater public pressure for action.

So, we at NTI have been sounding the alarm. That is why we recently released the video docudrama – "Last Best Chance" – that portrays a terrorist plot to detonate nuclear devices in the United States and Europe. We don't relish alarming the public – if that is the consequence of this docudrama – but we believe that seeing the danger is the first step to safety.

We need you to add your professional voice and efforts to this task. The professional credibility of this organization would be an enormous asset in making the case for quicker action – for doing everything we can to strengthen our defenses against sabotage, theft, and diversion of nuclear materials. To borrow a phrase from your report of 35 years ago, this is simply to: "follow objectively where professional responsibility and logic lead."

New Tools

The world community is aware of the danger of nuclear terrorism. Right now there are several new international efforts aimed at making it harder for terrorists to acquire nuclear weapons.

The first is the Convention on Physical Protection of Nuclear Materials. Throughout the history of the atomic age, there has been no international requirement for physical protection of nuclear material within a state – until last week, when nations from around the world, meeting in Vienna, adopted an amendment to the Convention on Physical Protection of Nuclear Materials. As you know, the Convention used to require protection of nuclear materials only in international transport. Now it requires physical protection of the nuclear materials within a

state. It also establishes a set of principles that countries should follow in safeguarding the material. It covers sabotage, which the original Convention did not. It also allows the IAEA Office of Nuclear Security to ask countries what they are doing to comply with the specific principles outlined in the Convention. For these reasons, the Amendment is an important development, and we welcome it.

In another major effort to keep nuclear materials from falling into terrorist hands, the UN Security Council, in April 2004, unanimously passed Resolution 1540. This measure codifies an explicit responsibility of states to prevent the proliferation of nuclear, biological, and chemical weapons, and their means of delivery, including by taking "appropriate effective measures to account for and secure" nuclear materials. The Resolution has the force of international law and is enforceable by the Security Council. It holds every country accountable, including those who have chosen to remain outside international nonproliferation treaties.

In a third recent effort, the UN General Assembly in April of this year unanimously adopted the International Convention for the Suppression of Acts of Nuclear Terrorism. The Convention will provide a legal basis for international cooperation in the investigation, prosecution, and extradition of those who commit terrorist acts involving radioactive materials or a nuclear device. This new Treaty also reinforces the previous two initiatives by calling on States Parties to make every effort to adopt appropriate measures to ensure the protection of radioactive material.

The Conventions and the Security Council Resolution collectively represent an acknowledgment that more urgent action on the part of the international community is needed to keep nuclear materials out of terrorist hands.

The Gaps between Threat and Response

Unfortunately, all three measures fall short. To make the Conventions binding, for example, each individual country has to vote to adopt the amendment, which will likely take years. That is time we do not have. Further, the Physical Protection Convention does not apply to military nuclear material, which represents up to 80% of the global total.

The Security Council Resolution, on the other hand, must be implemented to be effective, but there is no assurance that member states will follow through and actually do what they have resolved to do. First year progress has not been confidence building. Every nation has its own issues with regard to cost, sovereignty and the protection of state secrets. The UN Security Council will face thorny questions about how to respond if nations do not comply with its terms.

Finally, the amended Physical Protection Convention and the Resolution do not have specific standards for nuclear materials security. The Convention has a series of principles, which each country can interpret as it chooses. The Resolution does require an "appropriate effective" nuclear security and accounting system, but there is no agreement on what that means, and until there is, it will mean nothing.

This brings us to the two indispensable elements of nuclear materials security – both of which are missing from the Amendment to the Physical Protection Convention and the Resolution:

The first element: Identify the world's best practices in nuclear materials security and accounting.

The second element: Create the institutional infrastructure to put these best practices in place in every nuclear materials facility in the world.

Our objective here should be to surpass and run ahead of regulatory requirements.

I believe there is an extraordinary opportunity here for the nuclear profession to voluntarily formulate best practices for safeguarding nuclear materials, to communicate them widely, and to put them into practice throughout the world. This would not replace the efforts of governments; rather this path of nuclear security would run parallel to the efforts of the Amendment and Resolution, but run faster – because it would be unhindered by many of the obstacles that come with government action.

Not only is the nuclear profession in a strong position to do this – the nuclear profession has a very deep self-interest in doing so.

The Nuclear Profession's Role in Closing the Gap

For more than 30 years, I have been at the center of US energy policy formation and concerns about primary fuels balances. It is plain to me that the world needs nuclear power to meet twenty-first century energy requirements.

But the question at the heart of the size and nature of that nuclear future is whether the power of the atom, on balance, brings more benefits and advances to humankind or more damage and destruction.

Unfortunately, the question might be answered in a flash. One single destructive use could end much of the potential for the atom's beneficial use.

If a terrorist nuclear attack is carried out anywhere in the world, people all over the planet will immediately demand, and governments will impose, extraordinary measures to lock down and secure nuclear materials everywhere – measures that may well be incompatible with normal operations of nuclear power plants and research reactors or the very conduct of nuclear research. We should do all we can do to avoid that public response.

If we're going to have a bright nuclear future, therefore, we're going to have to have a more secure nuclear present.

As a matter of self-interest as well as professional responsibility, the nuclear industry has a special need to see that this essential security job is done and done well. It cannot be left to

government alone. This will require new thinking and new methods. It will require the expertise of people who know what works best and costs least – who can take into account the needs and designs of different facilities.

A Model for Defining and Disseminating Best Practices

As we know, there is already a model in the nuclear industry itself for how the nuclear profession can develop a consensus set of best practices, and distribute them throughout the industry and around the world.

After the Chernobyl incident in 1986, nuclear power plant operators knew their industry was in trouble – in the eyes of the public, and in the eyes of regulators.

In this climate, an international nuclear utility executive meeting took place, with 32 countries represented. It led to the founding of the World Association of Nuclear Operators [WANO] with the mission, according to the Charter, to "maximize the safety and reliability of the operation of nuclear power plants by exchanging information and encouraging communication, comparison and emulation among its members."

Today, there is universal membership in WANO. Every organization that operates a nuclear electricity generating plant is a member. All members pay dues, and provide experts to do the peer reviews.

1. WANO alerts members to events that have occurred at other facilities – reporting on causes, corrective actions, and lessons learned.

2. It conducts peer reviews that last for two weeks – all done in accordance with specific WANO "performance objectives and criteria." The review team then sends a confidential report to the utility.

3. WANO offers no-fee workshops and seminars, organized in response to member demand.

4. And most importantly, it identifies good practices – and distributes them by secure website.

I believe an organization similar to WANO is needed to ensure that nuclear materials are secured and made immune from terrorist theft. Like WANO, it should be done voluntarily through the nuclear profession. Unlike WANO, it should not wait to be formed until after a disaster. In my mind, INMM could be that organization.

The Beginnings of an Initiative

A year ago, in the summer of 2004, NTI sponsored with your organization two one-week workshops – bringing together a select group of nuclear materials professionals from government, industry and research venues around the world to discuss "best practices" for

securing and accounting for nuclear weapons materials. International meetings on nuclear materials management usually focus on policy level discussions. This meeting, on the other hand, was an open forum for technical information exchange among 90 nuclear materials practitioners from 36 countries. It was the first opportunity that many participants had had to meet with their colleagues from other countries and share ideas. They universally agreed that published guidelines do not take account of today's threats.

Participants gave presentations on best practices for nuclear materials management at their respective nuclear facilities and in the afternoons they met in smaller discussion groups to exchange ideas and work toward a consensus on best practices.

Based on these discussions, NTI and the INMM are developing a catalog of best practices from around the world and making them publicly available through their websites.

The challenge is to expand on this effort. I was gratified to note the inclusion of US-Russian cooperation on best practices for nuclear security in the joint statement from the Bratislava Summit. But this is just a start.

The Role of the INMM

The people here at this conference have a central role to play in this expansion. You are responsible for securing materials, for surveillance, for accounting, for tracking materials as they move. If there is a set of best practices for nuclear materials security, it should come out of a discussion started by the people in this room.

This discussion could then evolve into a set of ideas that could inform state regulatory actions – and, I think more importantly, the evolved practices could be embraced by facilities operators worldwide, resulting in a more comprehensive voluntary application of best practices beyond anything binding regulations could achieve. In other words, the nuclear profession can take the lead. This won't happen – in my view – unless the members of the Institute of Nuclear Materials Management show the way. We need your professional credibility to make the case for such an initiative, and we need your judgment and expertise to develop the right institutional infrastructure to carry it forward.

The New Infrastructure

This new infrastructure should meet several characteristics and discharge certain duties:

- In contrast to WANO, in which all members are operators of power reactors, the membership of this new security organization should be more diverse, to include fuel manufacturers, research reactors, and National Labs – indeed it should include any and all entities that have materials requiring physical protection.

- It should have full-time expert staff and a stable resource base.

- It should formulate and communicate broadly best practices for nuclear materials management.

- It should establish quantitative performance benchmarks for security and measure performance against them.

- Lastly, it should carry out peer reviews of facility security operations and make recommendations for improvements, investigate and document lessons learned from security incidents, and provide training for members' employees.

Of course, this cannot all be done at once. A phased approach will be required. Building such an infrastructure would take a steadfast commitment of time and energy. But it is hard to imagine anything more in the interest of your profession, and more worth supporting for your organization. Whether you would wish to build such a capacity and take on that mission is something for you to decide.

It won't be easy; it will require resources that you do not now have, and it will require the hardest of all things – institutional change. But – given the breadth of your membership and the huge professional regard for this organization, I believe this is a job INMM can do best, with the speed required to counter the terrorist threat.

A newly formed WANO-type organization cannot be formed and act with the alacrity of INMM. And IAEA, as we all know, has serious scope limitations and perpetual political problems which impair its effectiveness and the pace of its work. So as you ponder this matter, ask yourselves – If not you, who? And if not now, when?

Conclusion

I would like to close these remarks by addressing those conference participants who know the fine details of the best approaches to securing nuclear materials. When you took your jobs, and learned what you needed to know to do them well, you may not have envisioned the rise of global terrorism, and the emergence of terrorist groups that seek nuclear weapons. You may not have chosen your profession for the role it would give you in preventing the world's greatest threat. But here you are. Your knowledge and your position confer on you an ability to do what no one else can do as quickly or as well – help the world define and disseminate best practices so we can secure nuclear materials and keep them out of terrorist hands. Logic and professional responsibility tell us this job needs doing and that the mission is urgent. By taking on this responsibility, you can both help safeguard the world and preserve a nuclear future.

Thank you.