

**Prepared Remarks of John O. Brennan
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Nuclear Security Regulators Conference
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Chairman (Allison) MacFarlane, thank you for your introduction and for your leadership at the Nuclear Regulatory Commission. I especially want to thank you, Mr. Ostendorff, and your fellow Commissioners for hosting this event --the first such conference to improve the international cooperation and awareness we need between regulatory entities so that we can better protect nuclear and radiological materials. I also want to acknowledge Director General Amano, Ambassador McManus, members of the diplomatic corps, and so many distinguished guests.

I appreciate the opportunity to discuss how every member of this audience plays a unique and critical role when it comes to protecting current and future generations from the threat of nuclear terrorism.

As you know, this conference represents a national commitment made by the United States earlier this year at the Nuclear Security Summit in Seoul – a pledge known by many of you in the nuclear security business as a “house gift.” And it is an important element of President Obama’s broader, comprehensive Prague Agenda, which he laid out in 2009, including our long-term vision of a world without nuclear weapons.

Since then, the international community has demonstrated its commitment to this vision and has taken important steps to curb proliferation by nation states, most notably in the unprecedented sanctions now in place against Iran for its failure to meet its international obligations.

Equally important is the need to deal with non-state actors – a point the President has repeatedly underscored by noting that one of the greatest threats to global security is the possibility that terrorists might obtain nuclear weapons or sufficient quantities of weapons-usable nuclear material in order to wreak havoc and potentially kill thousands if not millions of people.

To prevent this scenario from becoming a reality, the President called upon the world to do what it takes *now* to lock down vulnerable nuclear and radiological materials and to prevent them from falling into the hands of terrorists. We recognized even as the President issued this challenge that the United States could not realize this vision unilaterally. The President addressed this again just yesterday when he helped mark the 20th anniversary of the Nunn-Lugar Cooperative Threat Reduction program. “We cannot let down our guard,” he said, “this needs to be a sustained effort.” And he declared that “working to prevent nuclear terrorism is going to remain one of my top national security priorities.”

That’s what brings us all here to this conference. This is a critically important step toward keeping nuclear capabilities beyond the reach of terrorists, a threat that still endures.

It is well known that several groups, including al-Qa’ida, have shown interest in acquiring weapons of mass destruction, nuclear weapons in particular. Ayman Zawahiri – and before him, Usama bin Laden -- have attempted to make religious arguments to justify the use of such weapons against America and other nations. Over an extended period of time, al-Qa’ida operatives have pursued nuclear materials, knowing that if they could acquire enough highly

enriched uranium or separated plutonium, they could threaten global security in an unprecedented fashion.

Since 9/11, we have made major strides in dismantling core al-Qa'ida leadership – to include killing bin Laden – and we have prevented al-Qa'ida's adherents from achieving stable safe havens from which to launch attacks, including potentially with weapons of mass destruction, against innocent men, women, and children.

Still, we cannot assume that al-Qa'ida's diminished capability will prevent it from achieving its ambitions to acquire a nuclear capability. Al-Qa'ida has tried for over a decade to acquire nuclear materials for a weapon, and we should expect its adherents – as well as other violent extremists with a variety of agendas – to continue trying to achieve their nuclear ambitions. In short, the threat of nuclear terrorism is real and serious, and it will endure for the foreseeable future.

The evolving and dynamic nature of the threat points to the need to carefully evaluate the underlying assumptions that underpin the “design basis threat” that guides your efforts. It is critical to get the design basis threat assessment right because it is against this assessment that physical protection systems are designed and evaluated, and I am glad to see it as a topic on the agenda for this conference.

Put simply, the stakes couldn't be higher for an analytical process that helps establish protection measures that can take many years and resources to develop and implement. If this process relies too heavily upon our analysts' ability to forecast how the threat will evolve based only upon what we know today, we run the risk of constantly playing catch-up, or of remaining vulnerable to strategic surprises from threats we didn't see coming.

As you discuss your threat assessment methodology, I want to encourage you also to consider how to close the *enduring vulnerabilities* that could be exploited by a wide range of actors and foreseeable threats. The capabilities of any existing adversary are prone to change in response to measures we deploy to thwart them. However, we can envision sustainable measures that, once initiated, decrease opportunities to access, steal, divert, or utilize materials, no matter how sophisticated or subtle the terrorist adversary becomes.

To take the long view of nuclear terrorism, we should think not strictly in terms of existing tactics, techniques, and procedures, but also about the nature of violent extremism itself, which, did not start with al-Qa'ida, and will not end with its demise. Violent extremists, steeped in ideologies that fail to thrive within the global order, will always seek instruments of terror to pursue their twisted ends. And these murderers know that weapons of mass *destruction* that can kill thousands or millions of people or that spread radiation across a populated area after successful sabotage of a nuclear facility, would have a mass *effect* on economic, social, political, and cultural systems far beyond the carnage generated at the point of attack.

Faced with this threat, we need to ask ourselves constantly what can we better control, within our own nuclear security regime, to reduce vulnerabilities in the most cost-effective and efficient manner?

At first, it seems reasonable to rely most heavily upon our information-sharing efforts that enhance our ability to identify and disrupt terrorist plots as they emerge. This approach is

absolutely necessary, and we are doing this every day. Such an approach, however, is insufficient, because we are dependent upon the limits of our intelligence and law enforcement capabilities to recognize early indicators and provide warning of any credible threat. We have been remarkably adept at disrupting plots against our homeland since 9/11, but 9/11 itself serves as a stark reminder of what can happen to even the most vigilant of nations.

A strong argument could be made that we need to guard against worst case scenarios by organizing and designing physical protection measures to defend against the most violent terrorist attacks that have proven effective in the past – for example, al-Qa’ida’s attack on 9/11 or Lashkar-e-Tayyiba’s attack in Mumbai in 2008. To this I would cite one of the many lessons we are learning from the recent break in at the Y-12 site within the US Department of Energy’s nuclear weapons complex. The lesson is that stacking our physical protection posture against highly sophisticated assaults can at the same time leave us vulnerable to less sophisticated, non-violent, yet potentially catastrophic incursions.

At the same time, however, the cases of loose nuclear material that we have interdicted from illicit trafficking networks underscore the inherent potential problem of *insider diversion* as opposed to snatch-and-grab assaults on nuclear facilities.

We might consider trying to cover all bases equally– from insider diversion to violent attacks – by imposing strict security measures designed to eliminate every conceivable gap. As we all know, however, this approach has tremendous practical and resource implications, and any effort to eliminate risk entirely would impact civil sector efficiencies to the point of making nuclear energy impossible to generate.

So, given the daunting task of designing a nuclear security system that prevents any type of insider diversion, external exploitation, and violent assault, it is tempting to believe that the technical challenges associated with developing weapons of mass destruction—particularly nuclear weapons capable of destroying large segments of a modern city—are simply insurmountable for terrorist groups. It may be comforting to believe that terrorists would never be able to construct such a device, even if they acquired the nuclear material needed to do so.

But we make such assumptions at our own peril.

Especially when we consider that the essential design concepts of the nuclear bombs used in World War II have been public for decades. What was cutting-edge physics in the 1940s during the Manhattan Project is now taught as basic concepts in many secondary schools and university programs. Computer technologies are evolving ever more quickly, and scientific and technical information is increasingly accessible. Given all this, can we really hold fast to the notion that individuals who want this knowledge won’t eventually develop it on their own?

When you combine this closing knowledge gap with persistent intent, we have to prepare ourselves for the possibility that terrorists will discover a credible technical pathway for constructing a functional nuclear device.

This pathway is made less difficult in light of how rapidly the landscape has changed with respect to nuclear material itself. Today, the civil nuclear energy sector processes and stores thousands of metric tons of separated plutonium. As President Obama noted at the Seoul Nuclear Security Summit, the civil fuel cycle presents us with a modern-day dilemma: the very

process that gives us vital energy can also put terrorists within reach of nuclear weapons. Recognizing the long-term risks of nuclear terrorism, we cannot keep accumulating stocks of separated plutonium and utilizing highly enriched uranium in civil reactors indefinitely – we must work together to reverse these trends. Likewise, we must focus intensely upon continuously improving the regulatory frameworks and security measures that protect that which already exists, and will exist in the foreseeable future.

This leads us back to the President’s challenge to do what we can *now* to achieve a world safe from nuclear terrorism, and how that call to action applies to you, as representatives of nuclear regulators, operators, and states with civil nuclear material. Of all the important things each of you could do, there are several areas that are in need of greater attention and which, if addressed, would have significant and immediate impact.

For example, how can we achieve an effective and cost efficient *balance* between physical protection and personnel reliability measures that reduce risks and deter a wide range of insider threats and outsider assaults on nuclear facilities and transports?

To protect the knowledge gap, what additional protections can we implement to reduce the risk of unauthorized disclosure of classified and sensitive information about nuclear materials or facility designs that could, if released, assist a terrorist group to perform a malicious act?

With respect to the material itself, what technical measures could we incorporate to make it more challenging for any terrorist to utilize these materials even if they gain access? Specifically, can we limit direct access to pure forms of plutonium and highly enriched uranium, and store it in diluted concentrations in order to make it even harder for terrorists to convert the material into a weapons-usable form?

It is important to note that any measures that effectively reduce the attractiveness of nuclear materials to terrorists also bolster other efforts. For instance, by increasing the steps required to turn civil nuclear material into material that can be used in a nuclear weapon, we also increase the likelihood that terrorists will be deterred from making an attempt to steal it in the first place. If they try, intelligence and law enforcement efforts stand a better chance of detecting the plot if terrorists have to engage in a greater number of more complicated steps to achieve their goals.

Perhaps your greatest task isn’t technical at all, but is the leadership challenge of fostering the focus and commitment to make these changes among all relevant stakeholders. Specifically, what can you do *now* to establish a sustainable security culture that embraces the essential roles and responsibilities of nuclear regulators within this global security effort – one that avoids the pitfalls of complacency, and encourages innovative measures to reduce risks?

It is often said that a network is only as strong as its weakest link. There have to be strong links between all components of a state’s nuclear security “regime” – between regulators, operators, officials, and the public – a genuine network of security culture and responsibility.

Such a regime itself includes a robust legislative and regulatory framework governing security of nuclear material and nuclear facilities.

It includes the institutions and organizations within the state responsible for ensuring the implementation of the legislative and regulatory framework.

It includes integrated facility and transport systems that prevent theft or sabotage.

It includes regulatory and law enforcement authorities that inspect and evaluate security performance, and enable operators to close gaps when they find deficiencies.

And, it includes emergency response elements that can thwart attacks or search for material if it falls out of regulatory control.

It also includes civil sector executives and leadership that also have a stake in achieving the shared vision of a safer world. Since Chernobyl and Three Mile Island, safety culture has permeated the nuclear industry – officials have come to see that safety liabilities can be devastating to the prospects of nuclear energy. Our collective challenge is to recognize the similar risks posed by security liabilities, and industry should give as much attention to security as they do to safety concerns.

Protection of nuclear material is a national responsibility that we must constantly not only fulfill but also improve, and we must follow through on our international commitments to work with like-minded nations to ensure that the threat never comes to fruition.

The Nuclear Security Summits held in 2010 and 2012 were in part designed to energize the global community to work toward strengthening nuclear security, reducing the threat of nuclear terrorism, and preventing terrorists, criminals, or other unauthorized actors from acquiring nuclear materials. In fact, the Summits were meant to enhance, empower, and elevate the many existing multilateral, cooperative institutions and structures aimed at securing nuclear materials and preventing nuclear smuggling. And we believe that the Summit process has done just that. But, as always, more work remains to be done.

Across the federal government, we are working with partner nations around the world to lockdown vulnerable materials as well as executing an integrated strategy that aligns authorities, capabilities, and resources to address global nuclear threats through a three-tiered strategy at the site, country, and global levels. We will continue to pursue this strategy.

Our goal remains to remove, consolidate, or eliminate as much nuclear material as practicable, and to ensure that all remaining sites, at a minimum, meet the guidelines set forth by the International Atomic Energy Agency's recommendations on nuclear security that were updated and published last year.

National regulations and the institutions that are responsible for implementing and testing the regulatory framework are the very foundation of our national efforts to secure nuclear material and facilities. There must be rules, and they must be followed and tested on a regular basis in order to reaffirm their effectiveness and achieve the best results. And, we must agree to share information on best practices and lessons-learned. It is noteworthy that the Republic of Korea, Japan, Kazakhstan and Canada, among other countries, have all reorganized their nuclear regulatory bodies to bolster the role of nuclear security.

The rich agenda of discussion topics and presentations being addressed by the international nuclear security community here this week affords us the opportunity to learn from each other and to have a frank exchange of views and share best practices across a wide range of critical nuclear security topics.

Among the many important things that we will be discussing this week is that, as we continue to implement regulations, we must evolve as the threat evolves and be willing to respond. This is why we come together to discuss how nuclear security concepts and practices should be revised, strengthened and more effectively implemented.

Many of you in the audience today were personally involved in the effort to revise the IAEA's Nuclear Security Recommendations Document, which has been a cornerstone of our international physical protection regime for many decades. In Seoul in 2012, we agreed to use this and related documents as the basis for helping states achieve their international legal obligations/ It is important that we continue to live up to this obligation, especially since it represents the international community's awareness that the threat is real and that we must evolve with it.

For example, the updated recommendations document now includes guidance for the rapid recovery of missing nuclear material and the mitigation of sabotage. It introduces a graded approach to physical protection that takes into account the threat, the relative attractiveness of the material to terrorists, and the potential consequences associated with theft or sabotage.

Importantly, it also introduces the concept of a physical protection "regime" as an essential component of a state's nuclear security system to protect against theft and sabotage of nuclear material and facilities. A critical element of this "regime" is the establishment by a state of a competent authority responsible for the legislative and regulatory framework.

As regulators, this means you are not only a key component of this overarching regime, you are essential to making sure it remains strong and endures into the future.

To be most effective, the regulatory authority needs to be independent and have access to the human and financial resources, information, and technology necessary to verify continued compliance for nuclear security at sites that hold or use nuclear material. And, you are called upon to ensure that evaluations based on performance testing are conducted, and that corrections are made, as appropriate, to address deficiencies.

We recognize that many states are taking their responsibility seriously and have in recent months made changes to national regulatory structures and updated their regulations. We hope this continues to be the trend as these enhancements help states meet their international obligations for nuclear security that are a part of a larger global nuclear security architecture.

This architecture includes national and regulatory bodies as well as the institutions, norms, and practices that will secure nuclear materials well into the future. It consists of binding legal commitments such as the Convention on the Physical Protection of Nuclear Material and the International Nuclear Terrorism Convention, which we hope the Senate will allow us to notify this year. It includes multilateral institutions, such as the International Atomic Energy Agency, and voluntary collectives such as the Global Partnership.

The Obama Administration believes that nuclear security will remain an enduring responsibility for as long as nuclear material continues to exist. And, we know that work remains to be done based on the commitments that we made at the 2012 Nuclear Security Summit. Accomplishing these goals will require strong leadership and a concerted effort to strengthen the global architecture for nuclear security that will carry us well into the future. That's why you're here

today and why I greatly appreciate the opportunity to talk with you on behalf of President Obama.

In this effort, you have a direct role to play in helping to defeat the threat of nuclear terrorism, which remains one of the most challenging and enduring threats to international security. Your mission, indeed your responsibility, is to execute that role with the urgency and excellence that the threat demands. As you do, you will have a full partner in President Obama and those of us who serve in his Administration.