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Prepared Remarks

United States House of Representatives Committee on Armed Services

Outside Perspectives on Nuclear Deterrence Policy and Posture March 6, 2019

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United States House of Representatives Committee on Armed Services Hearing on Outside Perspectives on Nuclear Deterrence Policy and Posture

2118 Rayburn House Office Building Wednesday, March 6, 2019 – 10:00 a.m.

Hon. Franklin C. Miller

"Deterrence is not, and cannot be bluff. In order for deterrence to be effective we must not merely have weapons, we must be perceived to be able, and prepared, if necessary, to use them effectively against the key elements of [an enemy's] power. Deterrence is not an abstract notion amenable to simple quantification. Still less is it a mirror of what would deter ourselves. Deterrence is the set of beliefs in the minds of the [enemy] leaders, given their own values and attitudes, about our capabilities and our will. It requires us to determine, as best we can, what would deter them from considering aggression, even in a crisis—not to determine what would deter us." The Scowcroft Commission Report (The Report of the President's Commission On Strategic Forces, April 1983, pages 2-3)

I thank the Committee for inviting me to appear this morning to discuss U.S. Nuclear Deterrence Policy, a subject in which I have been involved professionally for over four decades, almost three of which were spent actively formulating that policy in the Department of Defense and on the NSC Staff. I will use this written testimony to answer the six questions posed by Committee staff. I am appearing before you today in my capacity as a private individual. I am not representing and do not speak for any other individual, institution or entity. My answers, and the positions I take during the hearing, reflect solely my personal views except for those instances when and where I specifically quote official U.S. policy.

• What role do nuclear weapons play and what is the objective of nuclear deterrence?

The fundamental purpose of U.S. nuclear weapons has been, and continues to be, to deter -- that is, to prevent -- nuclear or massive conventional attack on the United States and on a select group of our treaty allies. There is a straight bipartisan line in this policy which begins in the 1950s and continues to today. Over time, the means by which the United States has made this policy actionable have evolved because, as former Secretary of Defense Caspar Weinberger once observed:

"Deterrence is dynamic, not static. In order to deter successfully our capabilities must change as the threat changes, and as our knowledge of what is necessary to deter improves". (Testimony, Senate Foreign Relations Committee, December 14, 1982)

As a result, the United States moved from "Massive Retaliation" in the 1950s, to "Flexible Response" in the Kennedy Administration, and has ever since adjusted the latter incrementally to accommodate changes in the threat environment, including in potential enemy leaderships and in their capabilities. But the purpose has always remained the same: to deter nuclear or massive conventional attack. U.S. policy is premised on the belief, as President Ronald Reagan made clear, that "A nuclear war cannot be won and must never be fought." In his preface to the <u>2018 Nuclear Posture Review</u> (NPR), then-Secretary of Defense Jim Mattis provided the most recent authoritative reaffirmation of this:

"nuclear weapons have and will continue to play a critical role in deterring nuclear attack and in preventing large-scale conventional warfare between nuclear-armed states for the foreseeable future. U.S. nuclear weapons not only defend our allies against conventional and nuclear threats, they also help them avoid the need to develop their own nuclear arsenals. This, in turn, furthers global security." (NPR p iii)

• Are there risks of miscalculation leading to nuclear war; if so, how can we decrease these risks? How can we increase strategic stability?

As my quote from the 1983 Scowcroft Commission makes clear, deterrence is the product of capability and will. This means we have to have confidence in our deterrent, and potential adversaries must have respect for it. Critical to maintaining an effective nuclear deterrent, therefore, is our ability to communicate or signal to potential enemies a credible retaliatory capability which threatens potential enemy leaderships' most valued assets, even in worst case scenarios for us. In the case of Russia and China, those "valued assets" are the elements of state power: the senior leadership itself, their military forces, their internal security forces, their ability to command and control the nation, and the industrial potential to sustain war.

Deterrence is mostly about what goes on in the heads of potential enemy senior leaders, not in our own heads. We need to be certain they understand what we will fight for and what we consider our vital interests to be. They must understand we have the capability to destroy the things and assets they value most, and that we have the will to do so if we are attacked.

Deterrence cannot and must not be based on mirror-imaging.

To cite former Secretary Weinberger once again:

We, for our part, are under no illusions about the consequences of a nuclear war: we believe there would be no winners in such a war. But this recognition on our part is not sufficient to ensure effective deterrence or to prevent the outbreak of war: it is essential that the Soviet leadership understands this as well. We must make sure that the Soviet leadership, in calculating the risks of aggression, recognizes that because of our retaliatory capability, there can be no circumstance where the initiation of a nuclear war at any level or of any duration would make sense. If they recognize that our forces can deny them their objectives at whatever level of conflict they contemplate, and in addition that such a conflict could lead to the destruction of those political, military, and economic assets which they value most highly, then deterrence is enhanced and the risk of war diminished. It is this outcome which we seek to achieve. (SFRC testimony, Ibid)

If one substituted "Russian or Chinese" for "Soviet" in the above paragraph, one would have essentially a fully up-to-date statement of U.S. deterrence policy.

The greatest risk of nuclear war and to deterrence stability, therefore, lies in a potential enemy's leadership believing it can carry out a successful attack, in a short war scenario, against us or our allies, using either conventional or nuclear weapons. Again, turning to the most authoritative recent statement of U.S. deterrence policy, the <u>2018 Nuclear Posture Review</u>, we read that "Russia and China are pursuing asymmetric ways and means to counter U.S. conventional capabilities, thereby increasing the risk of miscalculation and the potential for military confrontation with the United States, its allies, and partners."

More specifically, with respect to Russian miscalculation, the 2018 NPR states:

"Russia has significantly increased the capabilities of its non-nuclear forces to project power into regions adjacent to Russia and, as previously discussed, has violated multiple treaty obligations and other important commitments. Most concerning are Russia's national security policies, strategy, and doctrine that include an emphasis on the threat of limited nuclear escalation, and its continuing development and fielding of increasingly diverse and expanding nuclear capabilities. Moscow threatens and exercises limited nuclear first use, suggesting a mistaken expectation that coercive nuclear threats or limited first use could paralyze the United States and NATO and thereby end a conflict on terms favorable to Russia. Some in the United States refer to this as Russia's "escalate to de-escalate" doctrine. "De-escalation" in this sense follows from Moscow's mistaken assumption of Western capitulation on terms favorable to Moscow.

Effective U.S. deterrence of Russian nuclear attack and non-nuclear strategic attack now requires ensuring that the Russian leadership does not miscalculate regarding the consequences of limited nuclear first use, either regionally or against the United States itself. Russia must instead understand that nuclear first-use, however limited, will fail to achieve its objectives, fundamentally alter the nature of a conflict, and trigger incalculable and intolerable costs for Moscow. Our strategy will ensure Russia understands that any use of nuclear weapons, however limited, is unacceptable.

The U.S. deterrent tailored to Russia, therefore, will be capable of holding at risk, under all conditions, what Russia's leadership most values. It will pose insurmountable difficulties to any Russian strategy of aggression against the United States, its allies, or partners and ensure the credible prospect of unacceptably dire costs to the Russian leadership if it were to choose aggression." (NPR p30)

With respect to Chinese miscalculation, the NPR observes:

"China is developing capabilities to counter U.S. power projection operations in the region and to deny the United States the capability and freedom of action to protect U.S., allied, and partner interests. Direct military conflict between China and the United States would have the potential for nuclear escalation. Our tailored strategy for China is designed to prevent Beijing from mistakenly concluding that it could secure an advantage through the limited use of its theater nuclear capabilities or that any use of nuclear weapons, however limited, is acceptable.

The United States will maintain the capability to credibly threaten intolerable damage as Chinese leaders calculate costs and benefits, such that the costs incurred as a result of Chinese nuclear employment, at any level of escalation, would vastly outweigh any benefit.

The United States is prepared to respond decisively to Chinese non-nuclear or nuclear aggression. U.S. exercises in the Asia-Pacific region, among other objectives, demonstrate this preparedness, as will increasing the range of graduated nuclear response options available to the President. Both steps will strengthen the credibility of our deterrence strategy and improve our capability to respond effectively to Chinese limited nuclear use if deterrence were to fail." (NPR p32)

Since one element of deterrence is potential enemies' perceptions of our capabilities to carry out our stated policy, the adequacy – in their eyes – of our nuclear forces and the resiliency of our nuclear command, control, and communications (NC3) systems is critically important. Because most of the systems comprising the three legs of the U.S. strategic Triad are reaching the end of their respective service lives and must be retired, with or without replacement, the modernization of our nuclear forces and their associated command and control

and warning systems is of vital national importance. I will discuss the modernization program in my answer to a subsequent question.

• Can nuclear escalation be controlled and can you win a nuclear war?

No serious U.S. policymaker in recent memory has believed that a nuclear war could be controlled. Indeed, the risk that the military use of a small number of nuclear weapons might escalate into an all-out civilization destroying exchange is one of the great deterrents to any leader contemplating nuclear or conventional aggression against us or our allies. Perhaps one of the best statements in the recent past on this subject was made by the late Harold Brown, one of America's foremost nuclear strategists, in his final year as Secretary of Defense:

"we have no more illusions than our predecessors that a nuclear war could be closely and surgically controlled. There are, of course, great uncertainties about what would happen if nuclear weapons were ever again used. These uncertainties, combined with the catastrophic results sure to follow from a maximum escalation of the exchange, are an essential element of deterrence."

"My own view remains that a full-scale thermonuclear exchange would constitute an unprecedented disaster for the Soviet Union and for the United States. And I am not at all persuaded that what started as a demonstration, or even a tightly controlled use of the strategic forces for larger purposes, could be kept from escalating to a full-scale thermonuclear exchange." (Annual Report to Congress, January 1981)

Once again, we return to Reagan's dictum that a nuclear war cannot be won and should never be fought. The Committee might fairly ask, however, in light of all of the above, why U.S. policy since the early 1960s, and especially from the mid-1970s to the present day in both Democratic and Republican Administrations, places such great stress on providing a President a wide range of options. The answer is twofold:

- First, because potential enemy leaderships clearly have multiple nuclear options, it is essential that the United States maintain a flexible set of alternatives so that those leaderships understand that the U.S. has a credible counter to whatever they have developed – i.e., there is no circumstance in which they could believe they have an asymmetric advantage at any level of nuclear weapon employment -- and thereby to deter their resort to such options.
- Second, in the event that nuclear deterrence were ever to fail initially, it would be incumbent on a President to seek to halt the amount of violence and destruction at the lowest possible level. Once again, to cite former Secretaries Weinberger and Brown:
 - Our basic strategy, in direct support of our policy of deterrence has been, and remains, the prevention of any aggression, nuclear or conventional. But it would be irresponsible indeed immoral to reject the possibility that the terrible consequences of a nuclear conflict might be limited if deterrence should fail. To be sure, there is no guarantee that we would be successful in creating such limits. But there is every guarantee that restrictions

cannot be achieved if we do not attempt to do so. (Weinberger, SFRC Testimony, Ibid.)

- "it should be in everyone's interest to minimize the probability of the most destructive escalation and halt the exchange before it reached catastrophic proportions". (Brown, Annual Report to Congress, January 1981, Ibid)
- What are the relative characteristics of proposed US nuclear modernization systems with regard to stability and the risk of inadvertent or interlocking escalation?

The NPR calls for modernizing all three legs of the US nuclear Triad, essentially endorsing the previous Administration's plan to do so. So the first question must be "why a Triad?" The Triad started life, admittedly, as the offspring of inter-service rivalries of the 1950s. During the 1960s, however, strategists recognized that the combination of three different basing modes, each with unique strengths and different but offsetting vulnerabilities, separate attack azimuths, and complementary alert postures presented potential enemy offenses and defenses with insurmountable obstacles. It is that combination which provides for deterrent stability, because an aggressor cannot pre-emptively destroy the Triad or prevent the retaliation it could impose. This is why the Triad's underpinning of nuclear stability continues to guide U.S. force planning today. Indeed, former Secretary of Defense Jim Mattis is quoted in the NPR as saying:

> "I have also looked at – I have questioned – the Triad and I cannot solve the deterrent problem reducing it from a Triad. If I want to send

the most compelling message, I have been persuaded that the Triad, in its framework, is the right way to go." (NPR, p43)

To credibly degrade or destroy our retaliatory capability would require a substantial act of nuclear aggression, beyond China's current capabilities and arguably challenging for Russia. Today, an enemy planner contemplating a first strike against the United States must take account of the 450 Minuteman silos, the two strategic submarine bases, Washington, Omaha, and possibly the three nuclear bomber bases. This would obviously be a massive strike and would draw a major response – a deterring prospect for any rational opponent. This is why such an enemy attack is most unlikely to occur. If you eliminate the 450 ICBM sites, an enemy planner's job becomes vastly simpler: two SSBN bases, Washington and Omaha (and by the way on a day-to-day non-crisis basis, none of our bombers are armed and on alert). A massive strike is no longer necessary and nuclear stability would have been weakened significantly.

Over the decades, several theoretical schemes have been advanced to try to improve stability by modifying U.S. nuclear policy or posture. Nearly all of these, however, would have the perverse and unintended effect of weakening and undercutting stability. Two in particular stand out for their longevity and their ill effects:

• Despite a general belief in both the US and Soviet/Russian governments that maintaining missiles in an alert status did not create instabilities, for more than twenty years an element of the disarmament community has worried about alert intercontinental ballistic missiles (ICBMs). This has led to calls for taking the U.S. Minuteman force off alert, in the hope that the Russian government will take similar steps with its ICBM force. As Moscow's response to the 1991-1992 Presidential Nuclear Initiatives or to President

Obama's Prague Initiative makes abundantly clear, there is no reason to believe the Russian leadership would take a reciprocal step in this regard. Furthermore, despite years of study by the U.S. Government, no verification scheme has yet been devised to provide confidence that a missile either has been taken off alert or returned to alert status. Should a crisis develop, moves by each side to return disabled nuclear forces to an alert status would further heighten tensions and raise the specter of one side launching first in the belief that the other side had not completed its re-alerting activities. In other words, this supposed stability enhancement actually provides a possible tactical advantage that might provoke an adversary to believe that it could escalate to nuclear attack without suffering significant consequences. A Fact Sheet published by the U.S. Department of State during the second term of the Obama Administration summed this up as follows:

During [the] 2010 Nuclear Posture Review we studied in detail whether we should de-alert further any portion of our nuclear forces. That analysis took into account the impact further de-alerting would have on strategic stability and deterrence day-to-day, and in crisis or conflict. ...our assessment of the impact of further de-alerting on strategic stability in crisis led us to the conclusion that further de-alerting would be destabilizing, not stabilizing.... ("U.S. Nuclear Force Posture and Dealerting", Fact Sheet. Bureau of Arms Control, Verification, and Compliance, December 14, 2015)

 A second notion is that the U.S. should declare that it would never use nuclear weapons first (this is known colloquially as a "No First Use" – or "NFU" policy.) Should the U.S. adopt such an approach, it would be read, correctly, by our allies as removing our pledge to deter massive conventional attack against them. The U.S., through NATO, has since the 1950s threatened to escalate to nuclear use if a massive Soviet or Russian attack threatened the cohesion of NATO's defenses. Withdrawing that promise would shake the Alliance and perhaps cause some allies who could but don't build nuclear weapons to consider building their own. When members of the NSC staff raised the prospect of adopting NFU during the last year of the Obama Administration, strong letters of objection came in from senior officials in the United Kingdom, France, NATO Headquarters, and Japan; the Secretaries of Defense, State and Energy also strongly opposed the idea, and it was dropped. Furthermore, if NFU ever became U.S. policy, the Department of Defense would ensure that it was followed, whereas potential enemies would have a different approach. Russia refuses to rule out first use today; it's instructive to note that the USSR had a public policy of NFU, but when Soviet plans fell into our hands it was clear that the USSR was actively planning for First Use. Similarly, China's current NFU policy is highly nuanced, and may well mean that China would feel entitled to attack pre-emptively if its leaders felt threatened. Finally, even if the US were to adopt such a policy, it is highly likely that the leaderships in Moscow, Beijing, and Pyongyang would not believe that it was real, thereby vitiating any change in crisis behavior such a policy might be designed to foster

One good idea which came close to fruition but ultimately failed was de-MIRVing ICBMs, i.e. having ICBMs carry only one warhead. The idea

was to eliminate any advantage an attacker might gain by hitting a silo housing a missile with multiple warheads with a single warhead (in the jargon, to eliminate a "favorable exchange ratio"). The U.S. and Russia agreed in the START II treaty in 1993 to eliminate MIRVed ICBMs, but the treaty never entered into force. Nevertheless, the United States moved to de-MIRV the Minuteman force; Russia, to the contrary, still deploys large numbers of MIRVed ICBMs and, in fact, is about to deploy a new, heavily MIRVed large ICBM – the RS28 "Sarmat" -- as a follow-on to its existing large, heavily MIRVed SS-18.

In short, the answer to ensuring strategic stability is ensuring that a strong and modern US Triad exists, and equally, that the nuclear command and control system which undergirds it is equally modern and resilient.

• Are there gaps in U.S. nuclear deterrent capabilities?

US nuclear deterrent capabilities today suffer from two weaknesses. One, referred to earlier, is the overall age of the force. The original strategic Triad was created in the late 1950s and early 1960s. Twenty years later, that original force was modernized across the board by the Reagan Administration in the 1980s. The Reagan Triad should have been modernized by the George W. Bush Administration, but the perception of a benign Russia and events in the Middle East/South Asia diverted focus from this task. Many of the force elements – the Minuteman III missiles and their command and control facilities, the Ohio-class SSBNs, the AGM 86B airlaunched cruise missile and the NC3 architecture which supports them – have all surpassed their intended service lives. As former Defense Secretary Ash Carter put it in April 2017:

"the Defense Department cannot further defer recapitalizing Cold-War era systems if we are to maintain a safe, secure, and effective nuclear force that will continue to deter potential adversaries that are making improvements in their air defenses and their own nuclear weapons systems. The choice is not between replacing these platforms or keeping them, but rather between replacing them and losing them altogether. The latter outcome would, unfortunately, result in lost confidence in our ability to deter. The United States cannot afford this in today's security environment or in any reasonably foreseeable future security environment." (American Interest, Volume 12, Number 6, April 2017)

Accordingly, as noted earlier, the <u>2018 Nuclear Posture Review</u> calls for modernizing all three legs of the U.S. nuclear Triad (basically endorsing, with a few key changes, the Obama Administration's plan to do so). That said, new U.S. systems will not begin to be fielded until at least the mid-2020's, which given the age of our forces, will be, as the current commander of U.S. Strategic Command General John Hyten USAF says, "just in time". (remarks, Mitchell Institute Triad Conference, July 17, 2018.)

As an aside, given that Russia and China began modernizing (and in China's case expanding) their nuclear forces in the 2008-2010 time frame and that they are now annually placing tens of new strategic nuclear missiles in the field, new SSBNs in the water, and deploying other new nuclear capabilities (including Russia's deployment of the new INF treaty busting cruise missile), any notion that the U.S. modernization program has spurred a new arms race is ludicrous. Again, to quote former Secretary Carter: "Indeed, those worried about the start of a new arms race miss the lesson of the past two decades: Despite decades of American and allied reserve—for 25 years our nations have refrained from building anything new—many countries, including Russia, North Korea, and more, have been doing just that. And some of these nations are even building some new types of weapons. So those who suggest that the U.S. recapitalization is a major stimulus to other powers to build more do not have the evidence of the past 25 years on their side." (American Interest, Ibid)

"But the Russians are also very rapidly modernizing their own nuclear arsenal. I don't associate that with what we're doing. I associate it with the dynamics of their own feelings that nuclear weapons are one of the only things that guarantee their status in the world. ...But it's not what I think is best for the Russian people, but they're fueling their own nuclear modernization. It's a mistake to think that we're fueling it." (Vox interview with Max Fisher, Apr 13, 2016)

Because essentially the entire Triad must be modernized, the financial cost of doing so is not insubstantial. That said, critics of modernization have dramatically inflated that cost, throwing around a 30 year life cycle cost to produce a sticker shock reaction. This criticism, however, obscures two points:

- o First, 30 year costs always look large, regardless of the program.
- Second the cost of the modernization program, even when in full swing by the 2020's, is not expected to exceed 3-4% of the defense budget (before sequester caps were lifted). Current operating costs of the existing deterrent (which will continue) also run about 3% of the

defense budget, so the total cost of protecting America and our allies from nuclear and major non-nuclear attack is between 6-7% of the defense budget (and less than 1% of the Federal budget) – not too much to pay to prevent an existential threat.

The Committee will hear people testify that even that amount of money is a great deal to spend for weapons we never use. But the truth is we use those weapons every day.

The second weakness in our deterrent capabilities relates to Russia's development of a military doctrine which envisages the threat or even the actual use of low-yield nuclear weapons to "win" a conventional war. (This is commonly called the "escalate to win" or "escalate to de-escalate" strategy.) This Russian doctrine, which began to emerge in the late 1990's, explains why Moscow has modernized its shorter range nuclear forces – in order to provide the means to implement this doctrine – and why Russia has carried out field exercises which feature the use of these weapons in this type of scenario. The intended effect is to increase the readiness of Russia's armed forces to carry out such attacks while simultaneously to coerce and intimidate NATO member states. That the Russian government embarked upon this effort, in the full face of existing U.S. nuclear forces, suggests strongly that the Russian military believes the U.S. and NATO lack an appropriate counter. To quote the NPR:

"Russia's belief that limited nuclear first use, potentially including low-yield weapons, can provide such an advantage is based, in part, on Moscow's perception that its greater number and variety of non-strategic nuclear systems provide a coercive advantage in crises and at lower levels of conflict. Recent Russian statements on this evolving nuclear weapons doctrine appear to lower the threshold for Moscow's first-use of nuclear weapons. Russia demonstrates its perception of the advantage these systems provide through numerous exercises and statements. Correcting this mistaken Russian perception is a strategic imperative." (NPR p 53-54)

To remove any such destabilizing doubt in the minds of Russia's leaders, the Department of Defense has moved to build and deploy a limited number of modified Trident II W-76 warheads to provide a low-yield option to counter the Russian strategy and to dispel miscalculation and misperceptions about US will and capability. This modest step – deliberately eschewing any notion of mirroring the Russian investment in a wide series of low-yield tactical nuclear systems – is designed to enter service in the near future.

The low-yield Trident warhead has been attacked on a number of different grounds. One particularly pernicious suggestion is that the weapon is designed to lower the nuclear threshold, thereby making nuclear war-fighting a real possibility. This criticism flies in the face of official policy which is stated clearly and unambiguously in the NPR:

"To be clear, this is not intended to, nor does it enable, "nuclear warfighting." Expanding flexible U.S. nuclear options now, to include low-yield options, is important for the preservation of credible deterrence against regional aggression. It will raise the nuclear threshold and help ensure that potential adversaries perceive no possible advantage in limited nuclear escalation, making nuclear employment less likely." (NPR, p 54) • What role do nuclear weapons play in U.S. alliances? Do we need to forward-deploy nuclear weapons in theater?

The U.S. extended nuclear deterrent serves to reassure allies that we are fully committed to defend them and to deter nuclear and major conventional attack against them. It also serves as an "anti-proliferant" for allies capable of developing their own nuclear weapons, convincing them that they do not in fact need to develop independent nuclear deterrents.

Due to different histories, geographies, and threats in the two regions, forward deployments of U.S. nuclear weapons in Asia and Europe during the Cold War differed significantly.

In the Asia/Pacific region, U.S. forward deployments were almost exclusively maritime and did not involve allied participation. Given this, there is no imperative currently for forward deployments of US non-strategic nuclear weapons to this theater, although our Pacific allies today very much rely on U.S. strategic forces to help keep them safe.

In NATO, Europe, while U.S. Navy ships did deploy with nuclear weapons, the predominant nuclear deployment was on land and involved allied forces through "programs of cooperation". At the height of the Cold War, the US had up to 7,000 weapons forward deployed in NATO Europe. The fall of the Berlin Wall, the demise of the Warsaw Pact, and the breakup of the USSR created conditions in which the U.S. and its NATO allies felt comfortable slashing the forward based stockpile dramatically, and restricting it exclusively to a relatively small number of gravity bombs. Those weapons remain in NATO today, and four allied nations participate in nuclear burden sharing by maintaining nuclear certified dual capable aircraft (DCA), while other nations contribute to nuclear burden-sharing by supporting aspects of the DCA mission.

While it is true that some allied political figures in NATO countries, citing the relaxed tensions with Russia in the early 2000's, called for the removal of the US nuclear weapons, no allied government adopted that view as official policy. Indeed, as the Russian government stepped up its campaign of intimidation and nuclear saber-rattling against NATO beginning about 2010, the Alliance began to emphasize the importance -- both to deterrence and to reassurance – of keeping the weapons in Europe.

NATO's 2012, "Deterrence and Defense Posture Review", endorsed by all NATO heads of government at the Chicago Summit, stated:

"Nuclear weapons are a core component of NATO's overall capabilities for deterrence and defence alongside conventional and missile defence forces. The review has shown that the Alliance's nuclear force posture currently meets the criteria for an effective deterrence and defence posture." (para 8)

The Communique issued by NATO leaders at their 2014 Summit in Wales stated:

"Deterrence, based on an appropriate mix of nuclear, conventional, and missile defence capabilities, remains a core element of our overall strategy." (para 49) The Communique issued by Alliance leaders at 2016 NATO Summit

in Warsaw was even more explicit:

"As long as nuclear weapons exist, NATO will remain a nuclear alliance. ... NATO's nuclear deterrence posture also relies, in part, on United States' nuclear weapons forward-deployed in Europe and on capabilities and infrastructure provided by Allies concerned. These Allies will ensure that all components of NATO's nuclear deterrent remain safe, secure, and effective. That requires sustained leadership focus and institutional excellence for the nuclear deterrence mission and planning guidance aligned with 21st century requirements. The Alliance will ensure the broadest possible participation of Allies concerned in their agreed nuclear burden-sharing arrangements." (para 53)

Last year's July Summit in Brussels strengthened the 2016 statement:

Following changes in the security environment, NATO has taken steps to ensure its nuclear deterrent capabilities remain safe, secure, and effective. As long as nuclear weapons exist, NATO will remain a nuclear alliance. ... NATO's nuclear deterrence posture also relies on United States' nuclear weapons forward-deployed in Europe and the capabilities and infrastructure provided by Allies concerned. National contributions of dual-capable aircraft to NATO's nuclear deterrence mission remain central to this effort. Supporting contributions by Allies concerned to ensure the broadest possible participation in the agreed nuclear burden-sharing arrangements further enhance this mission. Allies concerned will continue to take steps to ensure sustained leadership focus and institutional excellence for the nuclear deterrence mission, coherence between conventional and nuclear components of NATO's deterrence and defence posture, and effective strategic communications. (para 35)

It is difficult to imagine a more convincing demonstration of allied support for nuclear deterrence and for the current NATO force posture. In these turbulent times, the withdrawal of forward based nuclear weapons would be viewed, unquestionably, by both NATO members and by Russia, as a strong indication that the U.S. had weakened its commitment to its allies.

• Concluding comment:

I look forward to elaborating on these answers and on other topics of interest to the Committee during the hearing.