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THE STATUS OF U.S. STRATEGIC FORCES

HEARING

BEFORE THE

STRATEGIC FORCES SUBCOMMITTEE

OF THE

COMMITTEE ON ARMED SERVICES
HOUSE OF REPRESENTATIVES

ONE HUNDRED ELEVENTH CONGRESS

FIRST SESSION

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THE STATUS OF U.S. STRATEGIC FORCES

HOUSE OF REPRESENTATIVES,
COMMITTEE ON ARMED SERVICES,
STRATEGIC FORCES SUBCOMMITTEE,
Washington, DC, Tuesday, March 17, 2009.

The subcommittee met, pursuant to call, at 10:00 a.m., in room 2118, Rayburn House Office Building, Hon. Ellen Tauscher (chairman of the subcommittee) presiding.

OPENING STATEMENT OF HON. ELLEN O. TAUSCHER, A REPRESENTATIVE FROM CALIFORNIA, CHAIRMAN, STRATEGIC FORCES SUBCOMMITTEE

Ms. TAUSCHER. Good morning. Happy St. Patrick's Day. And happy birthday to General Chilton's father.

General CHILTON. Thank you.

Ms. TAUSCHER. This is a hearing of the Strategic Forces Subcommittee, and the hearing will come to order.

The purpose of today's hearing is to examine the strategic posture of the United States and the status of our strategic forces, including our nuclear weapons program, missile defense systems, and military space programs.

The Strategic Forces Subcommittee has jurisdiction over each of these areas, which track closely with the responsibilities of the U.S. Strategic Command, or STRATCOM.

I want to welcome General Kevin Chilton, Commander of STRATCOM. General Chilton has testified before us before. And I want to thank you for coming back.

I want to thank you for the thousands of men and women that report to you, and the people behind you, who I know are directly responsible for your day-to-day activities. And we work with them very closely, as you know, and we very much appreciate their service and, always, their ability to work with us.

General CHILTON. Thank you, Madam Chair.

Ms. TAUSCHER. There is plenty for us to discuss today, given the many challenges we face with Russia, North Korea and Iran, and whether we will rework the Moscow Treaty, and a Comprehensive Test Ban Treaty (CTBT).

The challenges we face are complicated, and the world we operate in is dangerous, with rogue states and terrorists vying to get nuclear weapons. We know that our work here is critical to make the world a safer place and to rid the world of these horrible weapons.

In the debate over nuclear posture, there is an emerging bipartisan consensus. Two years ago, former Defense Secretary Bill Perry, former Secretaries of State Henry Kissinger and George

Shultz, and former Senator Sam Nunn, called for the United States to move toward a world free of nuclear weapons. President Obama has echoed this call, as well.

But even as we debate the feasibility of such a policy, we still face the ongoing challenge to be good stewards of our nuclear deterrent without undermining critical nonproliferation efforts.

These challenges highlight the urgent need for a robust discussion of the United States' strategic posture.

This subcommittee has acted to enable just such a discussion by establishing a bipartisan commission in the fiscal year 2008 National Defense Authorization Act (NDAA), to examine U.S. strategic posture and recommend a 21st century nuclear weapons policy.

Under the capable leadership of Bill Perry and former Defense Secretary Jim Schlesinger, the commission submitted an excellent interim report in December, and they will deliver their final report on April 1st. Drs. Perry and Schlesinger will also testify before our full committee on April 2nd.

General Chilton, since your testimony last year, the Congress has continued to have a vigorous discussion over the United States' ballistic missile defense (BMD) systems and policy. As chair of this subcommittee, I have argued that our primary focus should be on countering the most imminent, here-and-now threat to our deployed troops and our allies: short- and medium-range missiles.

This subcommittee also has oversight over our military space programs. There is no shortage of challenges here either. A year ago, we witnessed the United States' successful intercept of a failed satellite that could have re-entered the atmosphere in an uncontrolled way, threatening populated areas with hydrazine fuel.

Last month, an Iridium satellite and an old Russian Cosmos satellite collided in outer space. The debris created from the collision will be a problem for decades. The collision underscores the urgent need for a better Space Situational Awareness (SSA) capability.

The United States has a host of pressing strategic and policy challenges, all of them interconnected. In this hearing, we hope to continue a critical discussion, so that we may, together, chart the right strategic path forward for the United States.

Now, let me turn to my distinguished Ranking Member, Mr. Turner of Ohio, for any comments he may have.

Mr. Turner, the floor is yours.

STATEMENT OF HON. MICHAEL TURNER, A REPRESENTATIVE FROM OHIO, RANKING MEMBER, STRATEGIC FORCES SUBCOMMITTEE

Mr. TURNER. Thank you, Madam Chair.

I also want to extend a warm welcome to General Chilton, and thank you for your vision, leadership, and service to our Nation.

General, your testimony today on the status of our Nation's strategic forces provides us with valuable context and insight as we begin deliberations in the fiscal year 2010 defense budget.

Now, General, you and I were just talking a moment ago about, these are the hot topics that are facing our Nation and our international scene. And it comes at a time where there are discouraging trends in foreign strategic forces developments, highlighted

by last month's Iranian space launch and the impending potential North Korean missile launch.

Some have questioned the relevance and credibility of strategic deterrence in today's complex and uncertain security environment. It has also been questioned whether, in these times of global economic crisis and potential tighter defense budgets, we should sustain our current strategic capabilities or invest in their modernization.

Recently, Mr. McHugh, my colleague and House Armed Services Committee Ranking Member, observed, "Strategic deterrence may be exactly what will be required to bolster our allies and friends. A weakened global economy is unlikely to lead competitors and adversaries to decrease their strategic capability, as some may hope. In fact, it can be argued that the opposite is more plausible. Faced with fiscal constraints, will Iran double down on its ballistic missile program? The question merits our most careful consideration."

I am also interested in whether or not you share this view.

There are a number of significant events this year on the future of our nuclear policy and posture. As our chair has noted, the subcommittee looks forward to receiving the U.S. strategic commission's final report.

While some have urged the Nation to work toward the global elimination of nuclear weapons—an admirable goal—the commission's bipartisan interim report urged caution. "It is clear that the goal of zero nuclear weapons is extremely difficult to attain, and would require a fundamental transformation of the world political order."

The new Administration and Congress may consider treaty ratification and further stockpile reductions. But the commission warned that before such decisions are made, "the DOE and DOD should receive from the labs and STRATCOM clear statements describing the future capabilities and flexibility required to minimize the risks of maintaining a credible, safe, and reliable nuclear deterrent without nuclear explosive testing."

What military advice would you give policymakers considering such decisions?

In your testimony, you comment that the U.S. stockpile requires the most urgent attention, and that without action, our current weapons are not indefinitely sustainable. I do not know that others share your same sense of urgency.

Has the military begun to accept risk as a result of the aging stockpile? And how much risk are we willing to accept?

To address these risks, you supported the Reliable Replacement Warhead (RRW) cost and design study last year. Does this concept still have merit?

Later this year, we also expect a new Nuclear Posture Review (NPR). I am concerned that unless the NPR makes concrete decisions on nuclear force structure, size and composition, we may be further delayed in taking action to address the risks in our current stockpile.

Today, we will ask what key issues you believe the NPR must address.

Missile defense will also be a challenging topic this year, especially if reports of potential budget cuts prove true. We would ben-

efit from your discussion of the missile defense needs and priorities from the warfighter's perspective, particularly if there are potential gaps and vulnerabilities in our spectrum of defense.

Though our committee, in a bipartisan manner, has emphasized near-term missile defenses—Ground-based Midcourse Defense (GMD), Aegis, Terminal High Altitude Area Defense (THAAD), Patriot, and sensors—we also have to figure out a way to preserve investments in future capabilities. I would appreciate your thoughts on what future capabilities are most promising.

Since we will hold a hearing on space security tomorrow, I will hold my comments there for that hearing. And, as our current national space policy states, space is vital to our national interests. Yet recent events, such as the satellite collision last month and the Chinese anti-satellite (ASAT) test in 2007, serve as stark reminders of the vulnerability of our space assets.

This committee supports the need for greater Space Situational Awareness and protection capabilities.

We are also interested in how the need for greater survivability influences discussions and decisions about our space architecture and acquisition programs. What architectural attributes should guide our space acquisition investments? And what are your top priorities in space?

Lastly, I want to touch on intelligence and solicit your thoughts. Intelligence on foreign nuclear, missile, space, and cyber developments has a great influence on our policy and program decisions. Yet, as I observed on this committee, I am always surprised by how much we do not know. Our intelligence analysts are tremendously talented, but we must ensure that they have the capabilities and resources to effectively do their jobs.

Furthermore, is our military intelligence enterprise adequately organized and managed to address our intelligence gaps and shortfalls?

Though we do not have the details of the President's budget request, we are fortunate to have your perspective and expertise.

Today is an excellent opportunity to gain valuable insight from you on the military's requirements, priorities, and key issues. On that note, thank you again for being here today, and your willingness to share your assessment of our Nation's strategic forces.

Thank you, Madam Chair.

Ms. TAUSCHER. Mr. Turner, thank you for that excellent opening statement. I agree with you. Those were excellent questions you put forward.

We have got your written statement, General Chilton which is, once again, very comprehensive and thought-provoking. And I am looking forward to your shortened testimony.

General Chilton, the floor is yours.

STATEMENT OF GEN. KEVIN P. CHILTON, USAF, COMMANDER, U.S. STRATEGIC COMMAND

General CHILTON. Thank you, Madam Chair. I have just a few brief remarks I have asked if I might present to the committee.

Madam Chair, Ranking Member Turner, members of the subcommittee, thank you for the opportunity to testify today about the state of the United States Strategic Command.

And Madam Chair, thank you for recognizing my father on his birthday today. James Patrick will be most pleased to know that his name was brought forward here in this hearing today. I send him my best wishes.

Since assuming command in October of 2007, I have been honored by your counsel and thoughtful interest in the best ways to secure America's future together. Thank you for your time and for your staff's equally strong interest in visiting and learning about the command's capabilities and requirements.

Your strong support, especially for the exceptional soldiers, sailors, airmen, Marines and civil servants, and their families, with whom I have the privilege to serve, means a great deal to those who already give so much in the defense of their Nation.

Today, America faces unique national security challenges and equally unique leadership opportunities. These challenges include global population changes, serious economic difficulties, resource competition, bids for regional and global power, the threat of proliferation of weapons of mass destruction (WMD), and an era of persistent and often irregular warfare, coupled with an exceptional rate of technological change that often outpaces capabilities and policies.

These challenges make 2009 an especially noteworthy year, as we look forward to the report of the Congressional Commission on the Strategic Posture of the United States, and prepare to conduct both the Quadrennial Defense Review (QDR) and a Nuclear Posture Review within the Department. The recommendations made in these studies will shape our national security capabilities long into the future.

As the combatant command chartered with the global operational perspective, our responsibilities and relationships uniquely position STRATCOM to execute global operations, to support other combatant commands and to close potential seams between other combatant commands as well, and provide a clear and consolidated warfighter position on future global capability requirements.

I am pleased to tell you that the United States Strategic Command capably executes deterrence, space and cyberspace operations each and every day, and provides a unique global perspective in advocating for missile defense, information operations (IO), intelligence, surveillance, and reconnaissance (ISR) capabilities, and the capabilities that this country needs to combat weapons of mass destruction. Ultimately, we are about enabling global security for America.

Today, deterrence remains as central to America's national security as it was during the Cold War, because, as ever, we would prefer to prevent war rather than to wage it.

Last year, the Secretary of Defense approved our strategic deterrence plan, a significant first step toward integrating deterrence activities across the U.S. Government.

Still, credible deterrence rests first on a safe, secure, reliable, and sustainable nuclear enterprise, including our stockpile of weapons; including our delivery, command and control (C2) and ISR platforms; including our space-based capabilities, and our laboratories and industrial base; and on our most precious resource, our people.

Since the end of the Cold War, the U.S. has substantially reduced our deployed nuclear weapons, dismantled our production capability, and ceased nuclear testing.

Despite our reductions and lack of modernization of weapons and infrastructures, other states still seek nuclear weapons today.

Additionally, many of our allies rely on the U.S. nuclear deterrent umbrella. This reliance must be considered when addressing concerns of nuclear proliferation.

The most urgent concerns for today's nuclear enterprise lie with our aging stockpile, infrastructure, and human capital. 2009 will be an important year to act on these issues, to relieve growing uncertainty about the stockpile's future reliability and sustainability.

Space-based capabilities provide our Nation and our forces essential, but often unnoticed, abilities to act and operate. The satellite constellations that carry these capabilities, however, require more careful attention to eliminate delays that can leave us just one launch failure away from unacceptable gaps in coverage in the future.

We have made progress in Space Situational Awareness. But capability gaps remain and require sustained momentum to fill, as evidenced by the recent collision between an active communications satellite and a dead Russian satellite.

Cyberspace, another one of our key lines of operations, has emerged as a key warfighting domain, and one on which all other warfighting domains depend. We remain concerned about growing threats in cyberspace, and are pressing changes in the Department's fundamental network culture, conduct, and capabilities to address this mission area.

We also endeavor to share our best practices with partners across the government. Still, the adequate provisioning of the cyber mission, especially with manpower, remains our greatest need.

Finally, the command's advocacy efforts for missile defense capabilities, ISR management, information operations, and plans to combat weapons of mass destruction continue to mature, and positively influence the acquisition process within the Department. And STRATCOM is proud of our role in that process, and our ability to represent the needs of other combatant commanders in each of these areas.

In this uncertain world, your support is critical to enabling successful execution across the command's assigned missions and realizing our vision to be leaders in strategic deterrence, and preeminent global warfighters in space and cyberspace.

Madam Chair, thank you again for this opportunity, for the committee's providing me this opportunity, and for your support. And I look forward to your questions. Thank you very much.

[The prepared statement of General Chilton can be found in the Appendix on page 35.]

Ms. TAUSCHER. Thank you, General Chilton.

I wanted to elicit a broader response from you about something that I saw in your statement that I think we certainly agree on. The Congressional Strategic Posture Commission has made it clear that the science-based Stockpile Stewardship Program (SSP) has been a remarkable success.

And I think that that has accrued to the American people not only fabulous investments in the fastest computers in the world, the largest laser in the world—all used to simulate the testing that we used to do in the Nevada desert—but, at the same time, we obviously have kept and maintained a large number of hedge weapons.

In your statement, you say that we mitigate the risk of unanticipated technical challenges—which is a nice way of saying a bad piece of information—that the way we do that is only by maintaining more weapons than we would need otherwise.

And, not to edit your statement, but I think you agree that, fundamentally, the Stockpile Stewardship Program, in and of itself, is the real way that we—the science-based program is the real way that we mitigate. The secondary way is by keeping the number of hedge weapons that we do.

Can you talk a little bit about your assessment of the science-based Stockpile Stewardship Program and its importance? And how do we potentially leverage that in the future?

General CHILTON. Sure. Thank you, Madam Chair.

A couple of points, though, first on the hedging, just to be clear on that, what I mean by that. I think there are two areas that we retain the stockpile of non-deployed weapons at the levels that we do today.

One is for a technical challenge that might surprise us. For example, to find out a particular family of weapons has an inherent problem that we can anticipate runs throughout the family, and that they are no longer available as part of the deterrent. Having an excess number of weapons on the shelf that could be rapidly uploaded to other platforms to sustain the level of deployed weapons that we would need for today's policy and strategy is part of that hedge. And the reason we need those on the shelf today is because we have no production capacity.

In the Cold War, we hedged by having a large production capacity in that area. And we also benefited from the ability to test, to help resolve problems. Although that was not used all that often, it was still a capability.

The second reason for a hedge would be to be in a position to address strategic uncertainty. So, a sudden change in the geopolitical environment of the world, where political leadership in our country should determine that there is a need to increase the posture of our deployed forces. Again, without a production capacity, the hedge is to retain a large inventory on the shelf.

The Stockpile Stewardship Program has certainly been an important program over the last—was it 17 years now that it has been in place—since 1992. It is a program that I think, had we not started, I think we would have lost confidence in some weapons along the way. But because of the focus of the team and the support of that team, and their ability to delve into issues, discover them early and help us work solutions along the way, that has been quite helpful.

So, I am a strong advocate for maintaining robust support for the Stockpile Stewardship Program. However, I do not think that is the sole solution in front of us. I think we also need to look at modernization of our industrial base. We need to be able to produce the

key elements and, ultimately, nuclear weapons. And I think if we do that, if we have that capability, it will lead to an ability to reduce inventories, which is a desire of all in this business.

Thank you.

Ms. TAUSCHER. Three years ago, we reestablished the ability to produce pits, which is certainly part of the production chain. And so, it is not completely true that we do not have a production facility. We do not have an end-to-end production facility.

But clearly, where would you rank—I mean, clearly, we were told that, if we could reproduce pits, that we were solving a very big question mark in the future as to our sustainability of the current stockpile.

We obviously have a number of opportunities going forward to modernize a smaller arsenal, including something called Advanced Certification, which could effectively replace what was then—what used to be called RRW—in a way that we are, I think, being more responsible in the way that we are putting forward what we are doing.

My concern about RRW always was that it led people to believe that we were building new weapons. I do not think we want anybody to believe that. But I think we all believe that having a smaller stockpile, that is, where we have extreme confidence and reliability, where we also can do more security and create a sense that we had surety and more environmental soundness, is a goal, as long as we are reducing the stockpile and eliminating weapons at the same time.

So, can you talk briefly about the production of pits and where that fits into this area of production and the value that you consider it to have?

General CHILTON. Sure.

A couple points. The ability to produce a nuclear weapon requires plutonium production capacity and uranium production capacity.

So, there are two key elements of the infrastructure that I think need to be supported. One is the development or expansion of the plutonium and modernization of plutonium capabilities at Los Alamos. And then the uranium capabilities at Oak Ridge. They are Cold War—they are not even that—they are World War II era facilities.

Production—I would not use the word production capability at Los Alamos, it is a laboratory. And they can make about 10 to 20 pits per year. And that is not on the scale of a production capacity, in my view. And so, I think that needs to be robusted for both of those facilities, for sure.

I agree with you. We do not need a new nuclear weapon with new capabilities. But I do believe we have a great opportunity here to develop modern nuclear weapons, modernized, that have 21st century requirements put into their design. And the requirements of the Cold War era were maximum nuclear yield and minimum size. That, because we had small missiles, and we wanted to maximize the number of warheads we could put on top of them vis-à-vis the Russians. We were not worried about the Russians stealing our weapons. They had plenty of their own.

If we look forward to the 21st century, we do worry about terrorists getting their hands on our weapons. And in an environment

where we have reduced and probably never will grow a production capacity anywhere near that we had in the Cold War—we could produce close to 3,000 weapons a year. And, the desire that we have to step away from testing, that we have unilaterally, or, you know, self-imposed, not conducted since 1992—putting those together.

The number one design requirement, I think, as you look to the future, is high reliability. And we have the opportunity to add in a modernized weapon, safety and security features that we never envisioned that we would have or were a part of the original designs, in some of the weapons during the Cold War.

So, moving forward with a modern capability not only provides those opportunities of high reliability, increased safety and security, which then would immediately relate into a confidence that could help you lower the total stockpile.

They do another important thing and that is, by reenergizing the design, science, engineering, and production capability, you reenergize and maintain the human capital element that is also aging. And you attract a youth and energy into the programs that will make sure that 20 years, 40 years from now, America will still have the preeminent knowledge and know-how on how to maintain a safe, secure stockpile and provide this deterrent for America.

Ms. TAUSCHER. General Chilton, you have articulated something that I have been interested in for quite a long time. And I think the context—I call them "the fences."

As long as "the fences" include no testing, no new capabilities for the weapons, in the sense that you are not increasing yields, you are not making the weapon more robust in the sense that it is now a bigger weapon, and that it is all done in the context of ratifying Comprehensive Test Ban Treaty, and taking down weapons and dismantling them, hopefully in a cooperative agreement with the Russians and others.

You know, I think that that is really the kind of policy that can be reviewed in a very interesting way over the next few years. I think that we have a better sense now for where "the fences" need to be, and for what the goals need to be, including, you know, taking down the weapons and making sure that, as we create a weapon that is modern, as you say, that we are also taking away the hedge weapons and satisfying ourselves that what we have is modern and sustainable and safer and more secure.

So I think that those are very good words to use, and I really appreciate it.

Mr. Turner, the floor is yours.

Mr. TURNER. Thank you, Madam Chair.

General, the Reliable Replacement Warhead has been mentioned, and you have previously been before this committee, where you have discussed that proposal. And in reading your testimony that you have given us this time, you call for, "In other words, we need a concerted effort to assuage growing uncertainty and ensure a more reliable, safer, more secure and sustainable long-term nuclear deterrent." And you say, in your opinion, emphasizing what you have just said to us, "a stockpile modernization strategy and nonproliferation efforts should be considered complementary, not mutually exclusive, means to a safer world." "Modernization could pro-

vide," as you said, "a unique opportunity to introduce enhanced safety and security features that would render our weapons undesirable terrorist targets."

And, going on, you say, maintaining a robust nuclear deterrent is important for nonproliferation. And then you say, "We should also consider using sustainable designs, employing less-exotic and better understood materials, restoring a responsive infrastructure, and introducing increased weapon reliability and key safety and security measures as ways to further increase our confidence in our arsenal over time."

Now, I am not going to ask you to advocate for the RRW. But I am going to ask you, if you would, please provide me with some understanding of, what would be the difference from what you are asking for and what RRW is? We are looking to a policy focus of—if we are not going to go do that, we are going to go do something else that responds to these, what really are those differences?

General CHILTON. Well, sir, last year the program of record on the table to address the modernization issues was the RRW program. And there were difficulties with getting that accepted in the debate, I think primarily because there was not a, probably a new look at our policy. That was the argument. And we needed to first look at our nuclear policy before we moved forward in this area.

So, a couple of things are happening this year. And this is why I think 2009 is such a great year.

One, we have been talking about this issue for the last year-and-a-half. And I think that has really been important part of enlightening the debate and bringing this forward, so that we are postured now to go forward as a policy review goes on in the Nuclear Policy Review of the new Administration and the Department of Defense (DOD).

Not only that, we will have a Quadrennial Defense Review, which those two will be very linked, in my view, because that typically will focus more on the delivery platforms, whereas the Nuclear Policy Review will look more toward the nuclear part of the deterrent.

The fundamental points that I made last year in supporting RRW apply to the fundamental points that you still see in my posture statement today. They are describing a capability that we need of increased reliability, increased security, and increased safety in a modern weapon, not desiring a new—any new capabilities beyond that.

Does that answer your question?

Mr. TURNER. Yes. Thank you.

General, our Chair did an excellent job in asking, and you did an excellent job in responding to the issue about the current balance of our stockpiles and our Stockpile Stewardship Program. Recognizing that there are calls for reductions in our stockpiles, what do you think, or what would you believe is essential that we have to accomplish before we could safely do that?

General CHILTON. Well, first of all, you start with—I think it all starts with a Nuclear Policy Review, and a policy and a strategy. Now, because there could be—not necessarily, but there could be—changes in policy and strategy that would lead to reduced requirements for weapons. That is one point.

It could lead to a reduced—or an increased requirements for weapons, as well.

Then on top of that, as we looked—as we looked specifically at the hedge weapons that I talked about before, that are both hedging for technical and strategic uncertainty.

Remember, the way we hedged for strategic uncertainty in the past was having a production capability. That could be part of the solution, to reduce inventories.

The other way we could hedge for reduction in technical surprise is to have more robust design and, again, a production capability.

So, these things are kind of linked in my mind, as we looked at our—what we retain on the shelf, independent of our deployed forces. And so, that is why I think it is really important that we address the industrial base issues and the modernizations issues for the stockpile, as well as the stewardship program.

And if I could just add one point. It is kind of on what you mentioned in your first question about nonproliferation. I see there is a linkage here in two ways. One, if some measure U.S. seriousness in nonproliferation by the total inventory of our weapons. And so, following a strategy of improving the industrial base and modernizing the weapons, that would allow you to reduce the amount of hedge weapons you have. It could be in line with that, and supporting of that position.

Additionally, when we think about the reliability of our weapons in our inventory, there is a key linkage, I believe, to our allies, friends and allies, who rely on the nuclear umbrella provided by the United States of America. And their trust and confidence in the reliability of that umbrella, certainly, I think, links—has a linkage into—proliferation or nonproliferation concerns in the debate. And that needs to be considered as we look at this in the policy reviews this year.

Mr. TURNER. And then, for my last question, turning to missile defense. There is going to be a significant amount of budgetary pressures as we move forward. What are some of the priorities that you would like us to emphasize as we look to missile defense?

And then also, if you could comment on testing. As you view testing that has occurred to-date, and future testing that the Missile Defense Agency (MDA) plans, what are your thoughts and views there?

General CHILTON. First on priorities. I think where we come down in STRATCOM is that there needs to be a balance in priorities. I mean, we developed the missile defense system for really two fundamental reasons. One was for protection of the United States of America. And the other was for protection of our deployed forces forward.

And so, when we look at how we balance the investments in this area, or look at the capability gaps in these areas, we always have—it cannot be an either/or in my view, but there has to be a balance as we go forward.

And I think the discussions we have had internally with regard to how we prioritize, the way MDA has laid out their five-block approach to fielding, I think has been very instructional to us as we look to shift, or not shift, funding in various areas to support those priorities.

So, it is important that we continue to focus on both, in my view.

With regard to testing, looking in the rearview mirror, I would say, I do not know of a better way, or how we could have done a better job of fielding, as quickly as we did, the missile defense systems that we have in place today.

When you look at any other acquisition program in the history—recent history, and that would not even go back 20 or 30 years—it is hard to envision getting a new, a single new airplane on the ramp in less than 11 years from the start of a program. And yet, in the missile defense area, if you look at the advances we have made, both for the theater defenses and Standard Missile–3 (SM–3), and Aegis, and THAAD and in the defense of the homeland with the ground based interceptor (GBI) system, global Ballistic Missile Defense System (BMDS), it really has been impressive in the fielding of these systems.

But there has been some risk taken on in that, and some—to be fast. And that has been certainly in the testing area.

Now, as we look forward, I have reviewed and met with General O'Reilly about where he wants to take the Missile Defense Agency in the future with regard to testing. And I think he is on the right path for increasing our confidence in these systems as we go forward. I think the path will help improve the models that are important to MDA.

I think they will find budgetary savings in the approach he is going to take from a holistic perspective for acquiring targets, for example, and centralizing a little bit of the testing more in the Missile Defense Agency.

So, I am very optimistic of the path that he is charting right now.

Mr. TURNER. Thank you, Madam Chair.

Ms. TAUSCHER. Thank you, Mr. Turner.

The gentlewoman from California, Ms. Sanchez, is recognized for five minutes.

Ms. SANCHEZ. I thank the chairwoman.

General, first of all, thank you again for being before us.

My question has to do with the Warfighter Involvement Program (WIP), and the Priorities Capabilities List (PCL).

It is my understanding that the WIP and the PCL were developed to take warfighter views into account during the missile defense development process, and to identify the warfighters' longer term missile defense developmental priorities. So, my question is, how does STRATCOM identify, prioritize, and address combatant command priorities? And has it developed an assessment tool that can effectively identify the most urgent priorities?

General CHILTON. Thank you, ma'am.

We have a process that we use, not only for missile defense, but for all of our other areas that we are asked to advocate for, for all of the regional combatant commanders around the world. We call it our Senior Warfighter Forum, SWARF.

And my deputy commander, Vice Admiral Mauney, chairs the SWARFs for these areas. And what we try to do in these areas is collect from the regional combatant commanders their requirements. And one would be in the missile defense area for sure. And

so, this is a way that we inject those requirements into discussions that are then had when budgetary decisions are made later on.

Part of the requirements' development and prioritization efforts is the PCL, the Prioritized Capabilities List. And there is a dialogue that goes on after we have developed a Prioritized Capabilities List through conversations with the regionals—to include Northern Command (NORTHCOM), of course, who is a regional, but in defense of the homeland—to present the Prioritized Capabilities List to the Missile Defense Agency, who then returns back to us what they think is technically achievable within technology, and also budgetary constraints.

So there is that, I think a healthy dialogue of unconstrained wants with fiscal and technical realities that merge and then are presented, and decisions are made forward on which way to go forward in the program.

Ms. SANCHEZ. Is this a continuous process? Or is it done once a year? Or how do you——

General CHILTON. Well, we stay in continuous dialogue. But the SWARFs do happen on a scheduled basis, so they are periodic.

And ultimately, what you are working toward, of course, is in synch with the budget cycle——

Ms. SANCHEZ. Right.

General CHILTON [continuing]. In support of the program objective memorandum (POM) process.

Ms. SANCHEZ. Okay. And then my second question. Not only do I sit on this committee, but I also sit on the Homeland Committee. And one of the subcommittees would be the Cyber Security Subcommittee, which, of course, is—we are placing a lot more attention on, because it is a big gap.

And my question would be, what do you think is the greatest cyber security threat facing the United States? Do you think—do you think we are more vulnerable to cyber attacks on commercial or public infrastructure, or attacks on military cyber assets? What type of action is STRATCOM taking to deter? Whatever you can talk about here in an open forum.

And what were the lessons learned from 2008, when computer hackers from China hacked in to penetrate the information systems of the U.S.? And what do you need to better protect our country's information systems from these types of hackers?

General CHILTON. Your first question on the threat, ma'am, I am worried about all the threats.

And the threats, when we think about them, they kind of span from what I will call the bored teenager, which was, really, kind of maybe the first threats we started seeing in the hacker world, back in the 1990s, through, obviously, much more sophisticated threats that we are seeing criminal activity out there, all the way up to threats that could be sponsored by high-end and even nation-states that could potentially threaten not only our military networks, but also our critical national networks.

Are we vulnerable today across the spectrum? I would say "yes." And does more work need to be done in defending our networks? I would say "yes," as well.

Of course, at U.S. Strategic Command, what we have been asked to do by the President through the Unified Command Plan (UCP),

is to operate and defend in the military networks only, and be prepared to attack in cyberspace when directed.

But, day in and day out, our focus is on operating and defending our networks. And that takes a close relationship with the Intelligence Community.

We rely tremendously on support from the Intelligence Community writ large and, particularly, on the National Security Agency (NSA), because they can give us a lot of threat warning. They have an information assurance role and mission. And that marriage and the support that we receive from them has been instrumental in our efforts to operate and, particularly, to defend our networks.

We learn every day through various attempts to penetrate our networks—some which are successful, and many, many, many more which are unsuccessful—but we do learn from those and roll those lessons back in to.

What we need in this area, I believe, for U.S. Strategic Command is—well, and let me talk about the military, writ large.

Three things have been our focus area.

A changing culture, first of all. We need to start thinking about cyberspace and our utility of it, not so much as a convenience, but as a military necessity, because every domain, whether it is air, land, or sea, depends on cyberspace for their operations.

And I am not sure we have made that mental shift yet from these systems that really just grew up on our desks and are conveniences to us, to something that we need to protect. So, changing that culture is really important and, perhaps, the hardest thing to do.

The next thing we need to do, I believe, is change our conduct. And our conduct—by that I mean, defense and operation of our military networks is commanders' business. It is not some computer assistant's business. The security and the awareness of the security is our commanders' business. And commanders need to hold their—to train their people on security. And then they need to hold them accountable. They need to have robust inspection programs in cyberspace systems.

So when an inspection team arrives at my base to inspect my fighter wing, they not only look at my fighters and my maintenance, but they look at my cyber systems. And, if I put all the defenses in that STRATCOM has told me to put in, are they operating properly? Am I positioned and worried about the defense of that network? That is a change in our conduct today.

And then, lastly, we need to improve our capabilities. And that is in two particular areas, I would say. First, people; we have not resourced this mission area, in my view, correctly from a manpower perspective. We have made improvements in our schoolhouses, and the Secretary of Defense has given great support to increasing the throughput in our educational programs through our cyber schoolhouses. But we have not realized that increase in people capability.

And the second part is in technology. Too much today, we rely on still picking up the phone and passing information. And I think we can do better in some machine-to-machine capability, so that we can start anticipating and reacting to threats at network speed, as opposed to at human speed.

And so, some key investments in technologies are going to be very important to us, I think, as we try to advance the ball here in the military defense of our networks.

Ms. SANCHEZ. Thank you, Madam Chair.

And I would just like to say that I do not believe that this subcommittee has really maybe had a classified hearing on this particular area. It is a big area of concern and interest for me. And I might ask that we might do that at some point.

Ms. TAUSCHER. I am happy to do that. We have shared responsibility with the Terrorism Subcommittee for this very widening area of cyber security. And our plan is to have a joint hearing with ourselves and Congressman Smith's subcommittee. And we will do that as soon as we can get it on the calendar.

Thank you, Ms. Sanchez.

Now, I am happy to recognize the gentleman from Arizona, Mr. Franks, for five minutes.

Mr. FRANKS. Well, thank you, Madam Chair.

And, General, thank you for being here.

I am fully aware that the Air Force does not casually pin four stars on just anyone. But I want you to know I am glad they chose you to head STRATCOM. I think my own little babies have a better hope for walking in freedom, because they did that. And I am grateful for all that you do, and for all the sacrifice you have made for human freedom.

I also have noticed that most of the time when we—preceding some of the questions here—we quote your testimony. I think sometimes, generals get more of their own words spoken back to them, more than politicians, even.

So, I am going to begin by quoting your testimony.

You said in your testimony that, related to missile defenses, that they "provide a critical deterrent against certain existing and potential threats, increase the cost of adversaries' already expensive technologies and reduce the value of their investments."

And I believe, General, that that is a critically important point. Oftentimes, when we speak of missile defense, we think just of defending ourselves against missiles, rather than devaluing entire programs, to the extent that, hopefully, rogue states will not be able to gain technology that they can pass along to terrorists, which remains a great concern to me. And I think it is more short term than we realize.

But the committee has been working through this issue, and I wonder if you could help us understand, or just explain it to us, how missile defense systems deter potential threats and devalue our adversaries' offensive investments.

General CHILTON. Thank you, Congressman.

I think they do it in two ways. And I will even step back further and look at strategic—or deterrence in a broader sense. And going back to the Cold War, we felt—I think the United States felt—we had a pretty good handle on what it took to deter the Soviet Union. And likewise, the Soviet Union felt they had a good handle on what it took to deter the United States of America.

Today, in the 21st century, besides the complexities that we have talked about already, it is a much more complex geopolitical environment that we live in. And there is not this bipolar threat. We

are not just worrying about deterring one other nation-state. There are other threats to the United States of America that we need to consider deterring.

And some of these potential adversaries may not be as deterred by the nuclear might that we have, and, in fact, may not be looking at us from a nuclear exchange perspective, but more from a blackmail perspective or a dissuasion perspective, where, if we were not otherwise postured, might put—potentially put—the United States in a position of thinking more than twice about whether or not to engage in a conventional conflict in a region, because the risk would be a potential nuclear attack on the United States of America.

And so, having a missile defense system that could essentially neuter that threat, or counter that threat, has become an important element of the broader deterrence landscape, which looks beyond just a bipolar world, but to a multi-polar world, and to various actors who have maybe different values, different fears and different objectives in mind that they would like to achieve.

There is a dissuasion objective as well, by having a credible deterrent, a credible defense that might cause them to look at their investments in this area and realize that they can never outgun that capability, and make decisions to steer away from investments in things like long-range ballistic missiles and a nuclear weapons program, and steer those funds to other needs their country may have that are less threatening to the United States of America.

So, there is a deterrent aspect and then, hopefully, an aspect, if we demonstrate our capability and it is understood by the potential adversary, a decision calculus that we would hope they would make to turn away. And that is part of the dissuasion piece.

Mr. FRANKS. Thank you, sir.

General, in a February 27, 2009, press release—press conference, excuse me—in response to a question regarding our nuclear missiles being on "hair-trigger alert," which I believe was probably an unfair or unfortunate characterization, you said, "The alert postures that we are in today are appropriate, given our strategy, guidance and policy."

Can you discuss our current alert posture and its appropriateness?

And if I do not get to it—it looks like this will be my last question—thank you again for being here.

General CHILTON. Oh, thank you, sir.

Well, you know, you actually quoted back in the correct context. The context of my comments were, in today's policy and strategy, we have our forces, I believe, on the appropriate alert profile.

Mr. FRANKS. Would you characterize that as "hair-trigger alert"?

General CHILTON. I would not. I think that is a bad characterization, because I just think it evokes a vision in the minds, at least of my generation of Americans, who grew up with cowboy Western shows, that hair-trigger envisions a gun pulled, a finger on the trigger, and better not sneeze. And our current alert posture is nothing like that at all.

In fact, our current posture in our nuclear weapons are absolutely secure and safe, and not at risk from inadvertent use. And they are not at risk from not being used when so ordered by the

President of the United States, who has control over those nuclear weapons.

And so, my context of my comments were exactly as you put it, in today's current policy and strategy. It is not to say that, in the Nuclear Posture Review, as we review, that we as a nation may decide to look for a different policy and a different approach to doing things.

But we need to do that in a deliberative fashion, work from policy to strategy to posturing of forces, and not in reverse, in my view.

Mr. FRANKS. Thank you, sir.

And thank you, Madam Chair.

Mr. LANGEVIN. Thank you, Madam Chair.

General, welcome, and thank you for your testimony here today.

General CHILTON. Thank you, sir.

Mr. LANGEVIN. I apologize for having to step out. I had to speak on the floor. And so, if this has been covered already, you can let me know.

General CHILTON. I will be happy to readdress.

Mr. LANGEVIN. I have a particular interest and concern about cyber security, so I would like to turn our focus there.

I have been involved in a number of things that have tried to address our Nation's cyber security efforts including, just recently, one of four co-chairs of the Center for Strategic and International Studies' Commission on Cyber Security for the 44th Presidency, and had the opportunity to chair the Subcommittee on Homeland Security on Emerging Threats in Cyber Security last year.

It is obviously an ever-present threat, a growing threat, and an ever-changing nature of the threat is very hard to stay ahead of it.

My question is, listening to your remarks and reading the testimony on the role of STRATCOM in cyber security, I am certainly pleased to hear that the Department of Defense has a good understanding of the immense strategic global threats that our Nation faces. And I have had the opportunity to speak with General Cartwright on these issues a number of times, as well.

As you mentioned, however, these threats spread across government as well as private domains.

So my question is, can you please elaborate more on what you believe DOD's role should be in a government-wide approach to cyber security?

General CHILTON. I am sorry, sir. DOD's role?

Mr. LANGEVIN. DOD's role in a government-wide approach to cyber security. And I will stop there and——

General CHILTON. Sure.

Mr. LANGEVIN [continuing]. See if I can get in a second question.

General CHILTON. Today, Congressman, as you know, STRATCOM is chartered to defend, operate and defend, our military networks only. And so, we worry about the dot-military networks. We are not asked today to defend the .edu, the .com, the .gov. The consideration for defense of vulnerabilities in that area falls to the Department of Homeland Security.

That said, we are directed to be prepared to support the Department of Homeland Security, and have already begun those efforts by not only sharing office space with them at our—in one of my

component commands, the Joint Task Force for Global Network Operations (JTF–GNO).

By sharing lessons learned that we have learned over the last several years in trying to get our arms around defending just the military networks, we have established linkages between their centers, their Computer Emergency Response Team (CERT), and our command and control centers, so that we can share information, should we see a new threat vector coming into the military networks, that we make sure that they are aware of that, and vice versa. So today, we have begun to build a support linkage in that area.

I think the broader question of who should best do this for the other parts of America, where we worry about defending our power grids, our financial institutions, our telecommunications, our transportation networks, the networks that support them, I think that is going to be a key outcome of the 60-day study that the President has chartered, and probably findings beyond that study.

But I think that is the intent, is to take a good, hard look at what are the appropriate roles and responsibilities to go forward in that regard? And we at STRATCOM will be prepared to support in whichever way that we are directed to go forward.

Mr. LANGEVIN. Okay. Let me go to another one.

STRATCOM recently reorganized its structure—I think you alluded to this in your testimony—reorganized its structure for cyberspace operations, placing the Joint Task Force for Global Network Operations under the direct command of the Joint Functional Component Command for Network Warfare (JFCC–NW), who also acts as the director for the National Security Agency.

How effective do you believe that this reorganization has been? And, as a follow up, does this put too much military authority under our Intelligence Community? And as a follow-on to that, where does the Department of Homeland Security's mission to protect critical infrastructure fit under this new command?

General CHILTON. On the first point, what we have done is, the command authority still runs from the commander of U.S. Strategic Command, so these organizations still report to STRATCOM. And that is important, I think, because we have a Unified Command Plan that gives us authorities and responsibility, and a command chain that runs down.

In the past, I had two components working the cyber problem for me, one prepared for attack and attack as directed, and the other for operate and defend.

And what we have done is, I have delegated operational control of the operate and defend to my network warfare commander, General Alexander.

Now, the advantages of this, and the reason we did this, is because we firmly believed you cannot look at operate, defend, prepare to attack, attack and exploit, in stovepipes. You need to be able to look at them holistically, because they are so interconnected.

One can inform you of an impending attack, and allow you to posture. As you consider offensive operations, you want to make sure your defenses are up. When you are under attack, of course,

a way to respond is stronger defenses, but also attack. Offense is also sometimes the best defense.

So, finding a way to bring these two organizations together and more closely aligned is the intent.

We have already begun to see fruits from that, from that work, and better cooperation between the organizations. But we still have a lot of work to go.

General Alexander is just bringing forward to me now, and we are starting to assess, a plan that would show how he would implement, in detail, that organizational construct, which will require for him to grow some capabilities to oversee that entire staff, if you will, to oversee that entire group now.

An important point though. When General Alexander is working in this particular position, as the commander of JFCC–Network Warfare, he is wearing a STRATCOM badge, and he is reporting to the STRATCOM commander. We take great advantage of his linkages when he wears his other hat as the director of NSA, to build the bridges and linkages that we need for intelligence support to do the work that we do for operating and defending a gig every day.

So, the marriage and the close relationship there between the NSA when he wears that hat, and when he is wearing his network warfare hat and working for me, is really important when we think about how best to operate, defend and then, potentially, if directed, attack through cyberspace.

And then, sir, if you could repeat the last part of your question. I am sorry, I did not——

Mr. LANGEVIN. The last one is, where does the Department of Homeland Security's mission to protect critical infrastructure fit under this new command?

General CHILTON. Where does it fit.

Actually, again, I think the 60-day study might inform us on that. But it does not fit at all today. This command organization is aligned directly to support the commander of U.S. Strategic Command and the Unified Command Plan missions we have been given, which do not include defense of the homeland for those other networks, but are solely restricted to operating and defending the military networks.

Mr. LANGEVIN. I know you have a great challenge on your hands in protecting us in cyberspace, and I offer my support and whatever I can do to make your job easier.

And I thank the Chair.

Ms. TAUSCHER. Thank you, Mr. Langevin.

And I am happy to recognize the gentleman from Washington, Mr. Larsen, for five minutes.

Mr. LARSEN. Thank you, Madam Chair.

General Chilton, just to continue on the theme of cyber command, there are renewed discussions about establishing a new unified command for cyberspace operation.

In your assessment, what would be the impact of that, both for it and against it, of moving organizations such as the Joint Functional Component Command for Network Warfare and the Joint Task Force, out from under Strategic Command?

General CHILTON. Well, Congressman, first of all, we have a cyber command today, would be my first comment. And that is U.S. Strategic Command, because we have that mission today. And it is a mission we take very seriously, and a mission I think we have successfully advanced quite well in the operation and defense of the military networks.

There is another advantage to the mission set that have been given to U.S. Strategic Command. You will notice they are global in nature. They really are agnostic to lines drawn on a map, or even continents and oceans—mission sets of deterrence, the mission sets of space, and the mission sets of cyberspace.

One of the great strengths of having those under one organization is our ability to, when given a problem—and ultimately, a problem will resolve around a country that the United States has a problem with—we have the unique oversight and insight into these global domains, and can find synergies and opportunities to present integrated capabilities to the regional combatant commanders as we support their operations.

And so, I think there is a good synergy today for these three global mission sets in U.S. Strategic Command.

The other side of the argument is for standing up a single, focused command, you would gain the advantage of single focus in this area. And recall, we once had a single-focused U.S. Space Command. So, it would not be without precedent.

The challenge—there are some advantages to that in a singular focus, of course. But the challenge would be how to make sure you bring that integrated in, in an integrated fashion, to a set of capabilities that it would support, might make that a little more difficult.

And so, I think those would be just the broad balance comments I would have on that. But, rest assured, we have a cyber command today, sir. It is U.S. Strategic Command.

Mr. LARSEN. I get your drift on what your thoughts are on that.

I wanted to talk a little bit about the personnel side, the people side, because you did note that the schools are there. They are putting people out, producing folks.

But you still, I think in your verbal testimony, or your answer to a question, it sounded to me like you expressed some level of concern about, maybe it was a curriculum you had concern with. I am not sure. You talked about—you used the word "correctly," to try to be sure we structured these schools "correctly."

So, I guess I am hearing a bit of a disconnect in your thoughts about the schooling and——

General CHILTON. No, I may have misspoken there, sir. I do not have any issues that have been brought to my attention, or that I have with regard to our schoolhouses.

What we are doing is increasing the number of people we are putting through the schoolhouses, in an effort to increase the corpus of expertise we have in this particular area. And I think that is a good thing.

Where we are short of people, if you were to take a look at my Joint Task Force for Global Network Operations and our Joint Task Force for Network Warfare, and we have done a lot of studies

over the last year-and-a-half on what levels they should be manned at.

The manning is just not there. We have not been able to get either the positions I feel we need, or the belly buttons, if you will, to fill those positions appropriately.

And so, there is a challenge here. And it is not one that you would not anticipate in the development of a new mission set in a new domain. And that is, understanding requirements, what it takes to operate and do the missions you have been given in that area. And I think we have worked that really hard.

And then, growing and fielding the people, and organizing, training, and equipping the people to do that. The services know well today how to organize, train, and equip people for air, land, and sea operations, and space operations.

And now the challenge is to make sure we understand how to organize, train, and equip people for cyberspace operations, and adequately man the force that is chartered to provide the security the Nation needs.

Mr. LARSEN. So, are the services still trying to catch up with the specific needs of what that new community—that community needs?

General CHILTON. Right. And we have worked very closely with the services to help define and understand what those requirements might be for the future, by kind of looking back on past operations, by doing exercises, tabletop exercises and discussions. We have done quite a bit of work with the services over the past year, year-and-a-half, in this area.

So, at U.S. Strategic Command, we feel like we have a good idea on what the needs are. And now we are in the process of articulating them. And as we look forward, we will look for additional support from the services to not only send the people to the schools, which they are doing, but to think about how they organize, train, and equip to support these mission sets.

Mr. LARSEN. Madam Chair, are we doing a second round of questions?

Great. I will yield back then.

Ms. TAUSCHER. What are the most important steps the U.S. needs to take to improve our Space Situational Awareness capabilities, and what capabilities are the services, and the combatant commanders, and the Intelligence Community telling you they need from future space systems? And how do you see STRATCOM facilitating the efforts needed to meet those needs?

General CHILTON. From the Space Situational Awareness perspective, it is kind of a multi-pronged approach that is required. And you start, basically, with your ability to sense the domain, or to scan and surveil the domain.

And so, improvements in this area are important. And so, it is both in ground-based systems, some of which we continue to sustain from Cold War developments, developed systems. But also, we need to look for opportunities to expand our surveillance architecture beyond even just the borders, the traditional borders of the United States and where we have them today, because in this area, geography does matter. Where you are located on the Earth matters.

And so, we need to look at opportunities to expand our surveillance, both with ground-based radars and electro-optical capabilities in space. And there are opportunities here, I believe, to work with our friends and allies, to team with them in this particular area.

Next, we could do a better job today, and we are working this problem hard, with taking the data we receive from these sensors, and the data we could receive in the future, and bring them into our Joint Space Operations Center (JSpOC) at Vandenberg Air Force Base, in a fashion, in a machine-like fashion, where we can bring them in in an integrated fashion to look at.

Today, my commander for space, General Larry James, out there, oftentimes finds himself having to integrate all these different piece parts of the domain of space that he has charted to surveil on PowerPoint charts, as opposed to a holistic wave, or we would look at in the air domain, a common operating picture type display, where you could take one look on the big wall and see who the good guys are, who the bad guys are, who the neutrals are, and what they are doing in that domain.

Ms. TAUSCHER. Would that be like a fusion cell or——

General CHILTON. A fusion technology capability.

Ms. TAUSCHER [continuing]. Technology capability.

General CHILTON. But it requires——

Ms. TAUSCHER. Would you have to develop that yourself?

General CHILTON. No, you know, we have—services need to do that for us. And so, we are the demanding customer. And then we look to, in this case, the Air Force is working this problem for us through their acquisition arm at both the Space and Missile Systems Center (SMC) in Los Angeles, and the Electronic Systems Center (ESC) back at Hanscom.

So, getting common data, getting more data in, getting common data formats in, into a fusion-type machine is important. Calculation capability, or computer processing capability, is an important element, too, that is resident at the Joint Space Operation Center in the first space control element there, where you need to be able to—you know, we are tracking 18,000 pieces or objects in space today. More than that. Some is debris. Some are active satellites. And you worry about them running into each other, as was evidenced lately.

The computational capability to do that can be increased. Today, we only do what is referred to as conjunction analysis, better said collision, potential collision analysis, for our highest priority satellites. And the highest, of course, being our manned systems, the International Space Station and the space shuttle.

But it is a small subset of all the active satellites up there. And I believe we can look at opportunities to improve that capability, because I think where we need to go is to not only worry about those few high priorities that we have there, but all satellites that the U.S. military, at least, relies on for military operations. And that oftentimes includes civilian satellites, which we lease. And we are not able to do that today.

So, better sensors and more of them, common data, fusion element, computational capabilities, I think are areas that we can improve on. And I would add one more point.

I am really excited about the Space Based Space Surveillance (SBSS) system, which will be launched, either at the end of this year or early next, which will be the operationalizing of an experiment, called the Midcourse Space Experiment/Space Based Visible (MSX/SBV), where we discovered there was actually value in being in space in observing space, particularly in the geosynchronous belt.

And this capability, when we get up there, I am excited to see the improvements that will make in our situational awareness, particularly at the geosynchronous altitudes.

Ms. TAUSCHER. General, are you the first astronaut to be STRATCOM commander?

General CHILTON. Yes, ma'am.

Ms. TAUSCHER. That is pretty cool, is it not?

General CHILTON. Being an astronaut was pretty cool. [Laughter.]

I was very blessed to be a part of the National Aeronautics and Space Administration (NASA) for a part of my career. And what a great organization to be a part of.

Ms. TAUSCHER. Well, you bring a very distinct pedigree to the job. So, I am sure that that will inform us and make us even better than we have ever been.

General CHILTON. Thank you.

Ms. TAUSCHER. I am going to reserve any further questions I have and turn to Mr. Turner from Ohio.

Mr. TURNER. Thank you, Madam Chair.

General, earlier this year, the Administration requested a review by DOD and the Department of Energy (DOE) to include the National Nuclear Security Administration (NNSA) to, "assess the cost and benefits of transferring budget and management of NNSA or its components to DOD and elsewhere."

What are STRATCOM's or your views on this, on the Administration's idea, and that review?

General CHILTON. I guess I do not have any particular views one way or the other on that. I think it is a valid question to ask. I think it is a good question for the Administration to take on, and I am glad they are looking at it.

But I think it is not just a question for the Administration. It is a question for the Congress, as well, because, I mean, they are interlinked there in the oversight role, as well.

And so, I look forward to the results of the Administration's look at this here when that is published.

Mr. TURNER. One of the issues that you and I have discussed that I just want to put a footnote to this hearing, and not to discuss in an exchange here, is the issue of the security for our nuclear weapons, our labs, our nuclear installations that certainly, any such study would be a part of.

And I would continue to look to you, to your thoughts as to ways that we can enhance that, having a concern as to what our vulnerabilities might be, both within NNSA, DOE, and DOD. So, I would appreciate your continued thoughts in that area.

General CHILTON. Thank you.

Mr. TURNER. Turning then to space, as our Chair was discussing, there is certainly the—this is an evolving time. You and I were, as

we were just talking in the opening, and there is so much that is happening in what we are seeing other actors doing in space.

If you could talk for a moment, what is our posture, our plans or our policies, if we should be attacked? If someone should attack our space assets, how is it at this point that we proceed?

General CHILTON. Well, the United States always maintains the inherent right of self-defense. And our policy has been that an attack on one of our space assets would be considered a serious attack on the United States.

So, in our view, those are sovereign assets up there, the U.S. satellites that are up there. And it is one that we would take very seriously.

From a STRATCOM perspective, who is chartered to operate and defend our space systems, our military space systems, we have to always remind ourselves to look at it from a holistic perspective. There is a deterrence part of this, and there is an asymmetric part of this, as well.

It is easy to get too wrapped up in the physical defense, if you will, of a satellite, and not pay attention to the fact that that satellite cannot do its mission without an electronic connection to the ground. And that electronic connection, both for the maintenance of the health of the satellite and for directing its mission, is not only essential, but also a vulnerability.

And that electronic signal comes back to a ground station, which is fixed. So, in itself, that is a vulnerability. And then, it is probably plugged into the cyberspace to take direction, as well.

And so, when we at STRATCOM think about defense of space assets and we bring in both the cyber perspective, the electronic warfare perspective, the physical security perspective, when we think about that, and then also, what can be done with regard to our on-orbit satellites in both enhancing their awareness and our awareness of what is going on around them, or from the ground, being directed toward them—all as an integral part of the equation when we think about this.

Mr. TURNER. And that was the next area that I was going to, is this issue of deterrence. We have so many actors that are gaining in their capabilities, who are dedicating significant resources to their space assets and their ability to disable or diminish our assets.

On the nuclear side, on the missile defense side, we talk about deterrence frequently. What are some of the things that we can be doing more, or that we should focus on more in looking to the area of deterrence in space?

General CHILTON. Well, deterrence in any area involves a couple of things. One, a position needs to be taken on—a policy position, if you will.

So, you have to be able to look somebody in the eye and say, "If you do this, then—" and then, whatever the "then" is, has to be credible. Both credible internally, but most important, credible in the individual's eye who you are trying to deter.

It is not necessarily linked that, if there is a cyber threat, that you have to have a capability in cyberspace to deter somebody. Or if there is a space problem, that it has to be a space capability that deters them, or conventional, either.

I mean, you can go across domain and across areas and draw the lines in different areas. It could be an economic deterrent. If you do this, then you will suffer these economic or diplomatic penalties. That can be part of a deterrent strategy, as well. So, there are lots of elements that you can bring to bear in the quiver here.

And again, we have got to be cautious that we do not just get overly focused and say, because it is a space capability or space issue, we need a space capability to deter that.

We may have an adequate suite of other capabilities to deter that particular adversary. But we have got to have a—we also need to have a policy statement that puts the will behind the deterrent capability to make it effective.

Mr. TURNER. Thank you, General.

Thank you, Madam Chair.

Ms. TAUSCHER. Happy to recognize the gentleman from Washington for five minutes, Mr. Larsen.

Mr. LARSEN. Thank you, Madam Chair.

General, last year I was briefed on STRATCOM's electronic warfare (EW) capabilities assessment—capabilities-based assessment, which identified gaps in our military EW capabilities. I understand you are now working to finish the Functional Solutions Analysis (FSA)——

General CHILTON. Right.

Mr. LARSEN [continuing]. The FSA, which will include recommendations for how to address these deficiencies.

Could you let us know a little bit more about the role STRATCOM is going to play in implementing the solutions for EW gaps? Does STRATCOM just hand the FSA, the Functional Solutions Analysis, to the services? If not, what role will you play to make sure the recommendations—the appropriate ones—are implemented?

General CHILTON. Thank you, Congressman.

The FSA recommendations, as well as every other area that STRATCOM is chartered by the UCP to advocate in, whether it is missile defense, ISR, or, in this case, information operations or, combating weapons of mass destruction. These are areas where we have no forces or capabilities assigned to us, but we are ordered to get the warfighter input and advocate.

And so, what we will do with the FSA when it goes forward, of course it will be shared with the services. But the intent of doing this whole work, including the capabilities based assessment (CBA) and now the FSA, was to bring those forward in a fashion, to inform the fiscal year 2011 POM deliberations that will come this summer and fall.

And STRATCOM has a chair at the table, in particular portfolios of the POM deliberations. And most importantly, my J–8 staff, and that team gets embedded in the issue teams that address the trade space and the issues to be brought up to senior level decision-makers.

And that is where we have our best effect, I believe. Just having a seat at the table and being in the debate, making sure it is an informed debate, and bringing that perspective to not only the Department of Defense at the Program Analysis and Evaluation (PAE) level, the Office of Secretary of Defense (OSD) level, but also

at the services. And we found great success in sharing our input at that level, and coming to accommodations, even before the OSD review of the program.

But that is how we influence it, is by having a chair at the table. And I have a chair at the table at certain elements of the discussions that has proven very valuable.

Mr. LARSEN. Well, it has been an issue I have been tracking quite closely. The Navy's EW community, the electronic aircraft community, is in my district. I kind of got rolling on this with the Prowler squadrons, ended up working on the ground with our Marines and Army folks in Iraq and Afghanistan. And then, the Army is standing up a cadre of EW technicians, 1,600 by 2013 or so. And trying to be sure that we do not create just another set of stovepipe EW functions within the services, but looking at a more broad, defense-wide EW approach, I think it is real important.

And my understanding of the CBA was this was 1 of 10 lines I think, capabilities-based assessments that were being done over the last couple of years. The one related to EW is—the idea is to look at a more broad-based approach, and a more integrated approach within the Pentagon.

General CHILTON. Well, I think that is important. It was brought to the attention of the broader community about—a little over a year ago, that maybe we had lost attention, focus on the electronic warfare area, and it was an area we paid a lot of attention to, I know, in the past. I remember, growing up in the Air Force we certainly did.

And it was heightened not only by shortfalls perhaps in the air domain, but it was the need for increased focus in a land domain was amplified by the improvised explosive device (IED) problem that we faced over in Iraq and now face in Afghanistan, as well, and the electronic—you know, the remote ignition of those devices.

And so, I think you are exactly right, Congressman. We have an opportunity here, I think. I am excited to see the results of the FSA and how that moves forward, and an opportunity to look at EW again in the appropriate light and focus area, and look at it broadly.

Mr. LARSEN. Just another question. Thank you very much for that and expanding on that for me.

There is an interesting comment in your written testimony that you did not cover in your opening testimony. And there is a lot in there. Of course, we give you five minutes, so I did not expect you to cover everything.

But then you should expect us to read what you wrote. So, on export controls. Near the end you talk about unnecessary constraints by export control legislation and regulation and the need for appropriate flexibility to permit relevant technology transfer to allies or to decontrol—the decontrol of some technology in a timely fashion when commercial availability renders their control no longer necessary, mainly to help our friends and allies.

It is not new to me to hear that from folks. It is maybe new to me to hear that from STRATCOM or anyone in the military.

Can you talk about some of the discussion taking place within STRATCOM about export control legislation, regulation, and why you see the need for some changes?

General CHILTON. Yes, I guess it would be unfair for me to say that there is a lot of discussion within STRATCOM. And——

Mr. LARSEN. Well, let me put it this way.

General CHILTON. But I will——

Mr. LARSEN. You are the four-star general in charge of STRATCOM.

General CHILTON. Sure.

Mr. LARSEN. It is in your testimony. So, that tells me there is enough discussion in STRATCOM——

General CHILTON. Well, observation, perhaps, is a better way for me to say it.

And in working with the Space Partnership Council, we work very closely with the National Reconnaissance Office (NRO), the Joint Staff, NASA, the Air Force. I have listened closely, in particular to some of the past NASA administrator's concerns about America's ability to compete internationally. I have heard comments from foreign—other folks from the European Space Agency, for example, saying the best thing that happened to their commercial space enterprise was International Traffic in Arms Regulations (ITAR). I mean, I do not know the veracity of that or not. But the comment was made.

So, I just went down to French Guiana at the invitation of the French government, to observe an Ariane 5 space launch and tour their facilities. And it was very enlightening to me, and I much appreciated that.

I think they launched four satellites on top of that Ariane. None of them were U.S.-made. I think there was a U.S. company participating in one of the satellites.

But just data points, if you will, for me. And as I knit that together in my mind and think about what is required to sustain the industrial base of the United States of America for our critical communications satellites, our early warning satellites, weather satellites, Global Positioning System (GPS) satellites for the future, et cetera, I am concerned from inputs that I am receiving from others within our government outside of STRATCOM and the DOD, from observations I have made, that perhaps we need to take a look at this.

I understand clearly that we have to protect critical components that are sensitive in some sense, a military nature or scientific nature, that we might not want to share for national security reasons. But our industrial base is a part of our national security infrastructure, as well.

And so, all I am suggesting is that I think it would be fair to take a look at this and see is it—ask and try to answer the question—are our current regulations and policies putting at risk our industrial base for our national security requirements of the future, or not? Which could include our ability to compete commercially, but, you know, that is certainly out of my lane.

Mr. LARSEN. Thank you very much. That was a very informative answer. I appreciate it.

Thank you.

Ms. TAUSCHER. The gentleman from Arizona, Mr. Franks, for five minutes.

Mr. FRANKS. Well, thank you, Madam Chair.

General, you know, I do not want to place you in the crossfire of any policy decision that this committee may have to deal with. So I guess the best way to do that is to be very candid with you as to my own policy concern about an issue that has been in the news lately, and that I think that there is a growing concern, at least on my part, and that is related to the European site.

I will be very direct with you and members of this committee. I believe that that site is in danger of being scaled back, delayed or even potentially canceled. And I also believe that there are some windows of opportunity that we may have to devalue the Iranian nuclear program to the extent that perhaps, you know, the hope is that we can prevent that from ever coming into full being.

And again, an oft-stated concern of mine is that that program may eventually lead to giving technology to terrorists that would change our concept of freedom forever in our country.

With the growing, at least incontrovertible, issue of long-range missile capability, without even addressing the nuclear component, but with the growing, long-range missile capability of Iran—and I will ask you, if I can, outside the policy considerations, to just—if you could address the advantages, both strategically and tactically, that a fixed missile defense site has, like the one that we have heretofore planned in Europe, over some of the other sites in terms of its defense capability and deterrent capability.

I hope I have said that right, General. Does that give you enough to go on?

The main advantage I am looking for here is just from a military perspective. What is the advantage to having a fixed missile defense site in Europe to deal with potentially Middle Eastern missiles coming either toward the European allies or forward deployed troops, or, most importantly, our homeland?

General CHILTON. Okay. I think I can answer that from a—it is really, I think, more of a physics problem than anything. And that is, if you envision a threat from Iran in the future, of an Intercontinental Ballistic Missile (ICBM), and even at a long-range, Intermediate Range Ballistic Missile (IRBM) threat, a credible threat of that being developed, that would hold at risk the United States of America, and Europe.

Then, if you look at just the geometry of that, if your intention is to field a system that can defend both of those, or add to the defense of both Europe and the United States of America, then you would probably logically look to something on the European continent, in that vicinity.

If you were just concerned about defense of the United States of America, you would not necessarily need to do that. And so, therein lies—you know, it is really just a geometry problem and physics problem, in my view, but linked closely to our policies and our agreements, and also linked closely to the threat and how that might develop.

Mr. FRANKS. Well, I really hope that this year's Nuclear Posture Review will embrace your own position, so that we can appropriately—and I am switching gears on you—appropriately support a nuclear posture that is based on reality, and not academics or just abstract theories.

You mentioned that decreasing the level of readiness for the nuclear stockpile would be like—to use your words—taking the now, or sort of the now-holstered gun apart, and mailing pieces of it to various parts of the country, and then when you are in a crisis, deciding to reassemble it.

Now, I think that is a very apt description. But I wonder if you could expand on the risk of decreasing the level of readiness for our nuclear stockpile.

General CHILTON. Okay. Again, I made the comments in the context of our current policy and strategy. And I do not take off the table the absolute necessity to relook at that as part of a policy or strategy review.

I perhaps overstated, or stated, I think the analogy is still valid. But you could also say the analogy could be like taking the gun apart and just dispersing it around this room, as opposed to mailing it around the country. So I maybe used one where you envisioned having to rely on FedEx to pull this back together, as opposed to self-assembly.

But the point is that that is essentially what you are talking about doing, is you are delaying the ability, the responsiveness. You are eliminating the responsiveness of the system.

One thing that I think needs to be discussed broadly in the Nuclear Posture Review, and in any policy or strategy discussion with regard to our posture, is this concept of stability, strategic stability.

It was really important in the Cold War, and it was important to the Russians and important to us, as well. And there was even dialogue between us and the Russians—the Soviets, I should say then—on strategic stability.

And what this refers to in the theory, which I think is, in practice, a real concern, is you want to make sure you have taken away any incentive for an adversary to feel the need to strike first—or be tempted to strike first, because they felt like they could win.

And so, how you put your forces on alert can add to—what levels of alert and how you posture them—can add to or detract from strategic stability. And so, that needs to be considered if we take this question up as we go forward.

How does changing the alert posture of our forces, whether they be the ICBMs or the submarines—we clearly did for the bombers already—how does that address the calculus of stability in the deterrence equation?

Mr. FRANKS. Well, thank you, General. I certainly wish you the best.

And thank you, Madam Chair.

Ms. TAUSCHER. You are welcome, Mr. Turner.

Does any member have a further question?

General Chilton, thank you for being before us today. Thank you for your hard work and your leadership of STRATCOM. And the thousands of enlisted people, men and women, and the civilian force that works with you, thank you very much for their service. Please thank them for us.

This hearing of the Strategic Forces Subcommittee is adjourned.

General CHILTON. Thank you, ma'am.

[Whereupon, at 11:31 a.m., the subcommittee was adjourned.]

A P P E N D I X

March 17, 2009

PREPARED STATEMENTS SUBMITTED FOR THE RECORD

MARCH 17, 2009

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HOUSE ARMED SERVICES COMMITTEE

STRATEGIC FORCES SUBCOMMITTEE

STATEMENT OF

GENERAL KEVIN P. CHILTON

COMMANDER

UNITED STATES STRATEGIC COMMAND

BEFORE THE STRATEGIC FORCES SUBCOMMITTEE

HOUSE COMMITTEE ON ARMED SERVICES

ON THE UNITED STATES STRATEGIC COMMAND

17 MARCH 2009

NOT FOR DISTRIBUTION UNTIL RELEASED BY THE

HOUSE ARMED SERVICES COMMITTEE

STRATEGIC FORCES SUBCOMMITTEE

Madame Chairman, distinguished Ranking Member, and Members of the Subcommittee, thank you for this opportunity. Since assuming the leadership of U.S. Strategic Command (USSTRATCOM) in October 2007, I have appreciated many thoughtful exchanges with you and your staffs on our nation's security – in Washington, at our headquarters at Offutt Air Force Base, and at locations around the globe. USSTRATCOM remains a vital element of our national security structure. The Command appreciates your thoughtful interest and tremendous support for our team and in addressing America's security challenges.

Since my last testimony before you, the men and women of USSTRATCOM have made great progress advancing the Command's vision. Building on a unique mission set's natural synergies, we execute strategic deterrence, space, and cyberspace operations every day to achieve national and Command objectives. USSTRATCOM's unique global perspective, responsibilities, and relationships enable effective execution across all of our assigned missions, closing the seams between other combatant commanders and providing a clear and consolidated warfighter position on future requirements.

This year, 2009, will be especially noteworthy. America inaugurated its 44th President, the first in 40 years to assume office in a time of war. This Administration will undertake the Quadrennial Defense Review (QDR) and Nuclear Posture Review (NPR) in an era of largely irregular and persistent conflict. The recommendations made in these studies will shape America's deterrence and global warfighting capabilities far into the future. Today, I will provide an update on USSTRATCOM's progress, plans, and capability requirements, and seek your assistance in securing America's future together.

U.S. STRATEGIC COMMAND

Several milestones define the Command's 2008 progress. Last February, a USSTRATCOM-led Joint Interagency Task Force, formed in partnership with the National Reconnaissance Office (NRO) and many other federal entities,

eliminated the threat to human life posed by an uncontrollable satellite's frozen hydrazine fuel. This team adapted quickly and with great professionalism to the emerging challenge, providing lessons learned that enhance mission partner relationships and information sharing. In the fall, the Secretary of Defense approved a new global deterrence plan, a significant step toward integrating deterrence activities across government agencies and with Allied partners. By enforcing common standards and discipline throughout the year, our work in the cyberspace domain continued to better secure military networks.

The USSTRATCOM team also strengthened the Command's exercise program to meet the demand for operational proficiency across our lines of operation. The new, comprehensive field training program engages all Command elements well beyond previous command-post-only style exercises. This approach allows us to test and assess our combat readiness, re-emphasize every function's unique importance to the overall mission, and demonstrate effectiveness to ourselves and the world.

As a steward of America's nuclear enterprise, USSTRATCOM remains committed to the highest standards of excellence, and, after a fresh look, our team made several internal adjustments in 2008. We created and filled a new General Officer position within the Directorate of Global Operations, providing a senior-level, full-time nuclear mission focus. We also established the Nuclear Enterprise Council (chaired by USSTRATCOM's Deputy Commander) and the Nuclear Enterprise Board (comprised of staff and components) which provide active nuclear policy, requirements, operations, and surety oversight within the command. Finally, we expanded the capacity of the Command's Inspector General Office, allowing for 100% oversight of every nuclear inspection with direct feedback to the USSTRATCOM Commander.

STRATEGIC CONTEXT

The hallmarks of today's complex global security environment include pressures from population changes, competition for increasingly scarce natural resources, economic struggles, and bids for regional and global power. The United States faces stark economic challenges at home, just as we witness similar struggles abroad. The past decade's complicated security landscape blurred the way we define regular, irregular, strategic, conventional, and unconventional operations and the capabilities required to address them. Perhaps more than any other force, technology underlies today's challenges and opportunities, enabling activities once thought impossible but now deemed commonplace. We bank online, obtain driving directions from cell phones, communicate around the world from our living rooms, fly Unmanned Aerial Vehicles (UAV) in Iraq from the U.S., and expect information to be delivered in an instant. In some ways, a few well placed computer keystrokes today can potentially match the impact of earlier generations' armed forces - for good or ill.

Strengths gained from America's space-based and cyberspace-enabled capabilities are truly amazing. We must remember, however, that asymmetric advantages carry asymmetric challenges - a particularly poignant consideration in this era of irregular and persistent conflict. Though we cannot rule out the need for capabilities to dominate a classic, force-on-force conflict (indeed, those capabilities are an integral part of our deterrent), in the near term it is unlikely that any state would choose such a course with the United States. Adversaries are increasingly more likely to seek indirect and irregular means to challenge our freedom of action and disrupt our way of life. Countering these threats requires an innovative, global approach, one for which USSTRATCOM is uniquely positioned.

STRATEGIC DETERRENCE

The Department of Defense's (DoD) 2009 Quadrennial Roles and Missions Review identifies deterrence as one of six core mission areas and defines deterrence operations as "integrated, systematic efforts to exercise decisive influence over adversaries' decision-making calculus in peacetime, crisis, and war." Deterrence today is not just Cold War deterrence, and we cannot address all of today's threats with only yesterday's tools. Effective, modern deterrence requires a complex global understanding and the elegant execution of coordinated, whole-of-government options to meet today's broad security challenges. In that role, USSTRATCOM supports DoD efforts to foster interagency relationships and synchronize government-wide deterrence activities. In fact, the Unified Command Plan assigns USSTRATCOM's first responsibility as detecting, deterring, and preventing attacks on the United States, its territories, possessions and bases, and employing appropriate force to defend the nation should deterrence fail. Deterrence depends on both the credible capability to impose costs or deny benefits and the expressed will to do so. America's civilian leadership represents the "will" of the people. USSTRATCOM's job is to ensure that our national leadership has credible capabilities available, and that adversaries and allies alike grasp their nature and our constant readiness to employ them.

The deterrence problem grows more intricate each year, but our bedrock capability remains a reliable, safe, and secure nuclear deterrent. The same land-based, airborne, and seaborne delivery platforms; nuclear command and control platforms; communications and warning satellite constellations; ground-based radars; laboratories and industrial base; intelligence capabilities; and warhead stockpile that have always underpinned the U.S. strategic deterrent enterprise remain just as vital today as in the past. Nuclear weapons endure, for now and the foreseeable future, as essential national security tools, deterring both nuclear aggression among nuclear

powers and large scale conventional conflict. As long as other states maintain nuclear arsenals, we must maintain a reliable, safe, and secure nuclear deterrent. Nuclear weapons' political significance makes their status as much about political objectives as military requirements, but if our capabilities are not seen as credible, our leadership's options become severely limited.

Within the nuclear enterprise, the U.S. stockpile – which today is indeed reliable, safe, and secure – requires the most urgent attention. Without action, our current weapons are not indefinitely sustainable. The weapons continue to age and decay in ways we may not sufficiently understand, and even though the Stockpile Stewardship Program's scientific advances have allowed us to retain an acceptable level of confidence, we risk a disruption in confidence from unanticipated technical changes in nuclear and non-nuclear components. We mitigate that risk today, along with risk from an inability to respond to strategic surprise, only by maintaining more weapons than we would otherwise need. This is clearly an unacceptable long-term approach. Similarly, today we do not need new or additional weapons, nor upgraded military capabilities, nor an effort to resume nuclear testing, but we do clearly need to fix our decaying stockpile. In other words, we need a concerted effort to assuage growing uncertainty and ensure a more reliable, safer, more secure, and sustainable long-term nuclear deterrent.

Nuclear weapon proliferation represents a serious global challenge, and USSTRATCOM supports efforts to combat the spread, transfer, or use of nuclear weapons wherever possible. In my opinion, a stockpile modernization strategy and nonproliferation efforts should be considered complementary, not mutually exclusive, means to the same safer world. Modernization could provide a unique opportunity to introduce enhanced safety and security features that would render our weapons undesirable terrorist targets. It can be argued that the effort also strengthens the confidence numerous allies derive from

our extended nuclear deterrent umbrella, allowing them to forgo indigenous nuclear programs. Should these allies (many of whom have the resources and technical ability to develop their own nuclear weapons) come to believe the United States is unwilling or unable to protect their interests through the full use of our assets, I believe global nuclear proliferation could increase, a clearly unacceptable prospect for U.S. or global security interests.

Unfortunately, some other states perceive nuclear weapons as a significant bargaining tool and deterrent to conventional intervention in their regional conflicts, and non-state actors pursue them as weapons of ultimate terror. We must use all of the tools at our disposal to ensure that nuclear capabilities do not spread. Maintaining a robust nuclear deterrent capability should be seen as an important nonproliferation tool for both deterring potential adversaries and reassuring allies.

I ask for your support to act and ensure a credible nuclear enterprise for as long as our nation requires it. We need reliable warning, command, control, and communication systems to enable and direct our forces; Service programs that sustain the long-term viability of our land-based, airborne, and sea-based delivery platforms; and the meaningful nuclear weapons work in our laboratories to attract and retain the human capital necessary to support the nuclear stockpile of the future. Additionally, the valuable Stockpile Stewardship Program deserves robust support. We should also consider using sustainable designs, employing less-exotic and better understood materials, restoring a responsive infrastructure, and introducing increased weapon reliability and key safety and security measures as ways to further increase our confidence in our arsenal over time.

Other USSTRATCOM capabilities also contribute to modern strategic deterrence. U.S. missile defense capabilities provide a critical deterrent against certain existing and potential threats, increase the cost of

adversaries' already expensive technologies, and reduce the value of their investments. To provide the President a better range of non-nuclear options against rapidly emerging threats, we also require a deployed, conventional prompt global strike capability to hold at risk targets in denied territory that can only be rapidly struck today with nuclear weapon platforms. Sustaining a viable missile defense and filling our prompt global strike capability gap remain essential to broader deterrence. We appreciate Congress' Fiscal Year 2008 and 2009 support and look forward to 2009 as an important development year, as we increase the available range of national leadership deterrence options.

Finally, our new strategic deterrence plan, approved by the Secretary of Defense last year, incorporates an interagency approach and acknowledges the need for a new understanding of the global context in which we live. Accordingly, the Command's Director of Intelligence moved to recapitalize our organic intelligence capability and established the Strategic Joint Intelligence Operations Center (JIOC). These actions, recommended by the Undersecretary of Defense for Intelligence and applauded by the Secretary of Defense's Task Force on DoD Nuclear Weapons Management, will ensure appropriate intelligence support across our missions. Seeking new ways to understand our world, address national security challenges, and support combatant commanders' efforts to build global partnerships strengthens global security for America.

SPACE

Space assets, whether space or terrestrially based, provide the U.S. with vital communications, command and control, positioning, navigation, timing, surveillance & reconnaissance, environmental observation, warning, and launch capabilities. The greatest challenge facing our space assets today are all-too-often reactive planning, programming, and procurement processes best described collectively as "gap management." It is time for

this approach to end. Our historical experiences in space operations tell us that we will likely have a critical space capability launch or on-orbit failure in the future. We must posture ourselves to stay more than a single failure away from an unacceptable degradation in these national security capabilities.

Missile warning and satellite communications represent two such capabilities. Reliable and enduring strategic missile warning for U.S. leadership and forces is essential to defending our interests worldwide. Although Defense Support Program (DSP) satellites have provided assured, uninterrupted missile warning since 1970, this aging constellation is performing well past its intended lifetime. The DSP constellation's age and ongoing delays in follow-on programs place our missile warning capability at an unacceptable risk.

Similarly, to assure robust global satellite communications for our national leadership, nuclear forces, and combatant commanders, we will continue to need uninterrupted, survivable, and protected communications capabilities and more flexible, wideband assets to address bandwidth growth. I strongly urge continued support to protect against future failures or schedule slips and to provide effective satellite communications capabilities throughout the next decade.

We have begun to make progress in Space Situational Awareness (SSA), although February's unfortunate collision between an active communications satellite and an inactive Russian satellite highlights remaining SSA challenges. The U.S. space surveillance architecture detects and tracks thousands of objects, but critical gaps remain in an ability to fully characterize all on orbit objects, analyze and predict conjunctions, and protect not just military satellites but also the commercial satellites on which military operations rely. Working across the National Security Space Enterprise and with the Congress, we funded critical legacy SSA elements to

increase overall SSA capability. We must sustain the momentum gained through these investments and strive to close SSA gaps, bringing us ever closer to combining an operational picture of space with command and control systems and moving us from 'watching and reacting' to 'knowing and predicting' in the space domain.

An improved awareness of the entire operational space environment, including the ability to discriminate across natural and man-made threats, will establish the foundation for protecting the vital space capabilities of the United States and its friend and allies. Space Situational Awareness is also critical to ensuring our Nation's freedom of action in what is clearly a contested environment. With increasing concern about sustaining our constellations and the threats they face, space protection is increasingly important. The Air Force and NRO's development of a Space Protection Program last year represents an important step forward in this arena.

The U.S. must also continue to lead the community of space-faring nations in promoting spaceflight safety and encouraging responsible behavior. International space cooperation is essential to maintaining space as a free and accessible domain. I appreciated the opportunity to meet with many space-faring partners in 2008, including attending the Strategic Space and Defense Symposium in Omaha with delegations from the United Kingdom, Canada, and Australia. I also met with military space leaders from the United Kingdom, France, and Germany, and participated in a military space operations and security conference last spring in Paris, France. These engagements laid the groundwork for greater cooperation with our friends and Allies around the globe and with other leading spacefaring nations. Enhanced data sharing with our Allies is important to the future of Space Situational Awareness, as we build a common understanding of the space environment. Pursuing opportunities for mutual benefit through peaceful exploration, data sharing, and other endeavors strengthens alliances and national security with partners

who possess or are developing space technology and demonstrate the intent, will, and capacity for responsible space operations.

Finally, I remain concerned that our own civil and commercial space enterprise, which is essential to the military space industrial base, may be unnecessarily constrained by export control legislation and regulation. Clearly, legitimate national security concerns must continue to underlie the need to restrict the export of certain space-related technologies, equipment, and services. However, appropriate flexibility to permit relevant technology transfers to allies, or decontrol of some technologies in a timely fashion when commercial availability renders their control no longer necessary should be considered to help ensure our space industrial base for the future.

CYBERSPACE

Within DoD, USSTRATCOM is the global warfighter for cyberspace, charged with operating and defending the Global Information Grid (GIG), planning, and acting – when directed – to maintain our freedom of action in this domain. Cyberspace is a key front in today's irregular conflicts and is itself a warfighting domain upon which all others depend. In fact, irregular warfare manifests itself in cyberspace in ways not seen elsewhere, driven by actors ranging from the unsophisticated to the trained military hackers who can target industry, academia, government, and the air, land, maritime, and space domains. Consistent with the National Military Strategy for Cyberspace Operations, we have made progress toward defining requirements and advocating for Service cyberspace workforces. Still, addressing the cyber threat is no small challenge and demands a new mindset as we refine the culture in which we understand our responsibilities and grow our cyber expertise; shape the conduct we follow to organize and orient against threats; and improve the technical and manpower capabilities our Services and interagency partners bring to the cyberspace fight.

Cyberspace is a national challenge, further complicated, in many cases, by the physical location of the servers and constructs (organizational & administrative) developed for physical domains. All networks, regardless of their location, are at risk. Whether a network domain ends in .com, .edu, .org, .gov, or .mil makes no difference, as cyberspace intrusions can rapidly cross between military and civilian networks. Cyber threats demand new approaches to managing information, securing information systems, and ensuring our ability to operate through an attack. As we seek to mitigate the immense but unseen costs of cyber espionage, DoD personnel must always understand that every networked computer is on the front line. Everyone who logs on is a cyber defender first. There are no 'protected zones' or 'rear areas'; all are equally vulnerable. Future growth in intelligence, planning, and operations requirements emphasizes an increasing need to act and react at machine, not human, speeds.

USSTRATCOM's Joint Functional Component Command for Network Warfare (JFCC NW) and Joint Task Force for Global Network Operations (JTF-GNO) have added unprecedented rigor to meeting challenges within and beyond the cyber domain. For example, this team recently marshaled resources to mitigate capacity degradation stemming from breaks in undersea cables, restoring service with no significant operational impact. They have also implemented a more responsive command and control structure reliant on centralized orders and decentralized execution. This structure enables DoD-wide leadership to address computer security incidents and network compromises – enhancing timely threat identification and mitigation through unity of effort. Steps to secure the GIG also include enhanced internet access protections and improved instrumentation that give us greater visibility into and control of our diverse network configurations. Tightening the relationship between JFCC NW and JTF-GNO this past year has led to a better, more responsive capability to defend our military networks.

Within DoD, we continue to evaluate organizations, processes, and personnel to ensure agility in adapting to new challenges. USSTRATCOM is also working with the Services and leading a cyber Manning Integrated Process Team to determine cyber workforce composition and sourcing across DoD. The provisioning of adequate cyber forces to execute our assigned missions remains our greatest need in this mission area. Finally, we are also assessing joint doctrine to ensure that it addresses cyberspace operations and collaborative planning among the DoD, interagency, and allied partners.

GLOBAL SYNERGY

Beyond the three areas where we maintain day-to-day operational responsibilities, USSTRATCOM is also charged with synchronizing DoD planning and advocacy to support several joint mission areas. Taken most simply, we identify challenges and support solutions to issues that cross geographic combatant command borders and advocate for the right balance of effort toward achievement of theater and national objectives.

INTEGRATED MISSILE DEFENSE

The threat of WMD, coupled with ballistic missile proliferation, is a very real danger to the U.S., our deployed forces, and our Allies. We must continue the careful development of a missile defense capability that preserves our freedom of action at home and abroad. Regional and global ballistic missile threats will require sustained, focused attention and dedicated resources to ensure a balanced defensive capability portfolio.

This past year, the Missile Defense Agency's (MDA) efforts enhanced missile defense capabilities by increasing the redundancy and depth of the ballistic missile defense system. Additionally, successful tests in 2008 improved our confidence in the performance of existing capabilities. Close coordination between combatant commands and MDA enabled warfighters to train with and operate the ballistic missile defense system while continuing to support a robust test and evaluation program.

Through USSTRATCOM's maturing advocacy role and the Warfighter Involvement Process, warfighting combatant commanders, in particular U.S. Northern Command, influence MDA development decisions. MDA's program activities are also reviewed by the Missile Defense Executive Board (MDEB), which meets quarterly and includes USSTRATCOM. I believe the MDEB provides effective oversight.

This year, USSTRATCOM's Joint Functional Component Command for Integrated Missile Defense (JFCC IMD) developed a Global Integrated Missile Defense Concept of Operations in concert with the geographic combatant commanders. In the coming year, this effort should implement a collaborative planning framework to address present day threats with pre-planned rules of engagement and execution doctrine. JFCC IMD is also exploring mechanisms to increase interoperability with our allies' capabilities to enable better operational cooperation. Agile concepts of operation, integrated sensor suites, warning systems, and common battle management systems will help us to better address future threats.

COMBATING WEAPONS OF MASS DESTRUCTION

A key 2008 National Defense Strategy objective is to prevent adversaries from acquiring or using weapons of mass destruction. Our nation must prepare – across the collaborative whole of Federal, State, and Local governments – to deter, dissuade, detect, tag, track, intercept, and destroy WMD materials. Should the worst occur, we must also be ready to respond.

In the last year, several USSTRATCOM initiatives enhanced our nation's ability to combat weapons of mass destruction. The Joint Requirements Oversight Council validated our Joint Capabilities Document, prioritizing current combatant commander needs and providing a foundation for future capability development. We also facilitated the first Global Combating WMD Synchronization Conference, bringing stakeholders from across the government into a common forum to promote a unified approach and to clarify roles across

the combating WMD community of interest. We initiated a Capabilities Based Assessment to define requirements for DoD to support National Technical Nuclear Forensics, which should be complete in early 2009 and inform future advocacy efforts. The Joint Elimination Coordination Element, intended to form the core of a Joint Task Force for elimination, progressed toward full manning and supported multiple combatant command exercises, providing valuable planning capability. Finally, the SCC-WMD-managed Interagency Combating Weapons of Mass Destruction Database of Responsibilities, Authorities, and Capabilities emerged this year as a key information reference resource, aiding planning, advocacy, and training exercises and assisting in providing transparency and synchronization across the federal government for assessment, planning, and response activities.

Congressional support for standoff detection of shielded nuclear materials sparked additional interest and investment in this high priority area, allowing the Defense Threat Reduction Agency to accelerate promising active interrogation technologies, as evidenced in a field demonstration last September. Intelligence linkages between USSTRATCOM and U.S. Special Operations Command – including a newly created cell for Joint Intelligence Preparation of the Operational Environment – should enhance predictive analytic capabilities, allowing us to act rather than react to threats. Finally, in support of the National Response Framework, our efforts this year with U.S. Northern Command, U.S. European Command, and other Allies will focus on mitigating the effects of an actual attack. The results of an evaluation across geographic combatant commanders' consequence management capabilities only amplified the need for additional experts and trained personnel to operate in contaminated areas.

INTELLIGENCE, SURVEILLANCE, AND RECONNAISSANCE (ISR)

USSTRATCOM, through our Joint Functional Component Command for Intelligence, Surveillance, and Reconnaissance (JFCC ISR), collaborated with

geographic and functional combatant commanders this past year and participated in planning, allocation, and assessment efforts to optimize global ISR utilization. An enterprise-wide management approach in 2008 enabled adequate support for surge operations in U.S. Central Command while mitigating risk to ISR support for other commands. Within the Secretary of Defense's ISR Task Force, USSTRATCOM also spearheaded efforts to highlight the vital link between collection systems and processing, exploitation, and dissemination (PED) capabilities, making progress to ensure that ISR collection and PED requirements are paired appropriately.

Operations in Iraq, Afghanistan, and across all combatant commands continue to intensify global ISR demand. Modern technological advancements enable large volumes of intelligence data to flow to warfighters, analysts, and decision makers around the globe. While available ISR capabilities continue to increase, demand has risen even faster. Unmanned Aircraft Systems in particular have experienced explosive growth, but demand continues to outstrip existing capacity. Many intelligence requirements lie beyond the reach of our manned and unmanned terrestrial platforms and can only be met by space-based capabilities. We must continue to address these warfighter requirements and mitigate dangers to our forces as we begin the development of the next generation of space-based ISR. We will need an efficient, responsive ISR enterprise long into the future to employ available resources while modernizing key assets, synchronizing operations, integrating U.S. and Allied ISR capabilities, and meeting the challenges posed in the space and cyberspace domains.

INFORMATION OPERATIONS

Controlling the use of the electromagnetic spectrum and ensuring its availability to our forces and our Allies remains fundamentally important to all of our missions, other combatant commanders, and larger national security efforts. In the 21st century, an increasingly congested and contested

electromagnetic environment promises new challenges to maneuverability and operations through this increasingly limited resource. During the past year, we successfully completed a DoD-wide effort to identify and address joint electronic warfare capabilities and gaps. The Joint Information Operations Warfare Command's (JIOWC) Electronic Warfare Center is now conducting a Joint Staff directed study to identify and recommend viable solutions to identified gaps, ensuring our joint forces access to and freedom within the electromagnetic environment for the full spectrum of military operations. We have also made significant strides in ensuring well-coordinated and synchronized trans-regional information operations across the combatant commands, in an effort to better link actions toward achieving theater and national objectives.

CONCLUSION

America today faces unique national security challenges and equally unique leadership opportunities. In the face of an increasingly complex strategic environment, we must act to address the long-term safety, security, and reliability of our nuclear enterprise; the robust health of critical space-based capabilities; and the culture, conduct, technical capabilities, and manpower necessary to defend against 21st Century cyberspace threats. USSTRATCOM, as a warfighting combatant command with a global perspective, is uniquely positioned to execute and integrate these vital, global missions and to support national security activities around the world. In this uncertain world, your support is critical to enable USSTRATCOM's successful execution of its assigned missions. The men and women of U.S. Strategic Command are fully engaged and with your help will continue to provide global security for America.

QUESTIONS SUBMITTED BY MEMBERS POST HEARING

MARCH 17, 2009

QUESTIONS SUBMITTED BY MS. TAUSCHER

Ms. TAUSCHER. The Congressional Commission on the Strategic Posture of the United States, which was established by the FY 2008 defense authorization bill, will deliver its final report in two weeks. One of the key issues they have been examining is whether the concept of strategic deterrence changed since the end of the Cold War? Do you believe it has? If so, how?

- What implications might such changes have for the size and composition of the U.S. nuclear deterrent force?
- What implications might such changes have for the non-nuclear elements of U.S. strategic posture?

General CHILTON. The concept of strategic deterrence has evolved since the end of the Cold War. Deterrence must be effective across a spectrum of potential adversaries from nation states to individuals as a function of the adversary's decision maker, security environment, U.S. objectives, and other factors. Strategic deterrence must address the desire of states and non-state actors to acquire and use weapons of mass destruction (WMD) against the U.S. and our allies. Nuclear weapon and ballistic missile proliferation remain critical concerns with respect to non-state actors and rogue nation states. In addition to these broader strategic deterrence requirements, our extended deterrence capabilities must assure our allies and encourage non-proliferation, reaffirming the continuing need for a credible, reliable, safe, and secure nuclear deterrent.

The end of the Cold War has had a profound impact on the size and composition of the U.S. nuclear deterrent. The Nation has reduced our stockpile from over ten thousand warheads to just over two thousand operationally deployed strategic nuclear warheads (ODSNW). It may be possible to further reduce these numbers, but reductions must be done in concert with synchronized revisions to our national nuclear strategy, arms control agreements, and nuclear stockpile modernization efforts. It is anticipated that the NPR will explore and develop the force structure for the nuclear forces that will be needed for the next 5–10 years. The Nuclear Posture Review (NPR) and Strategic Arms Reduction Treaty (START) follow-on negotiations are underway this year and USSTRATCOM will fully support both of those efforts. Additionally, future credibility of our nuclear deterrent will depend on stockpile modernization. A modern warhead coupled with a responsive nuclear infrastructure would retain our ability to hedge against technological or geopolitical uncertainty with fewer numbers of warheads in the stockpile.

We face threats today that cannot be deterred with nuclear weapons alone. We have been the victim of cyberspace intrusions and have seen other nations develop capabilities to hold our space assets at risk. The strategic deterrence challenge for the non-nuclear elements of U.S. strategic posture is to hold at risk what our enemies value most, to counter ideology, WMD acquisition, ensure survivability of our networks and space assets, and protect against a WMD attack. Along, and in coordination with the NPR, the Quadrennial Defense Review is anticipated to explore and develop recommendations for non-nuclear forces that will also consider their value in deterring adversaries along these lines. Our non-nuclear capabilities must continue to advance in technology and quantities to address the broad range of adversaries in a balanced way.

Ms. TAUSCHER. The Nuclear Posture Review (NPR) is expected to be completed by the end of 2009. What key issues should the NPR address?

General CHILTON. As we seek to balance capabilities and resources for our complex strategic environment, the NPR should address the following:

1. Role of nuclear forces in U.S. national security strategy, planning, and programming.
2. Policy requirements and objectives for the U.S. to maintain a reliable, safe, secure, and credible nuclear deterrence posture.
3. The relationship between U.S. nuclear deterrence policy, targeting strategy, and arms control objectives.

4. The role missile defense capabilities and conventional forces play in determining the role and size of nuclear forces.
5. The levels and composition of the nuclear delivery systems required for implementing the United States national and military strategy, including any plans for replacing or modifying existing systems.
6. The nuclear weapons complex necessary to sustain a credible, reliable, and safe nuclear deterrent and remain flexible to respond to geopolitical and technological change.
7. The active and inactive nuclear weapons stockpile required to support U.S. national and military strategy, including any plans for replacing or modifying warheads.
8. Recognition of the need to assure allies as well as deter potential adversaries.

Ms. TAUSCHER. What do you believe are the security threats with the greatest implications for our strategic posture and policies? In view of such threats, are we making the right investments in strategic systems?

General CHILTON. The security threats with the greatest implications to our strategic posture and policies are regional and non-state actors who seek to develop, acquire, proliferate, or use weapons of mass destruction (WMD). Over the last decade, states have expanded both nuclear weapon production capabilities and delivery system testing; further increasing the risk of proliferation to non-state actors seeking to harm the U.S. and our allies.

USSTRATCOM supports an interagency approach which synchronizes government-wide deterrence activities to ensure our national leadership has credible capabilities to meet today's broad security challenges to combat the spread, transfer, or use of nuclear, biological, and chemical weapons. We must continue to credibly deter through a broad strategy that includes a complementary approach to the sustainment, modernization and security of our strategic systems as well as a clear focus on nonproliferation activities. We must continue making critical investments to sustain, modernize and recapitalize our strategic forces to maintain a credible deterrent into the foreseeable future.

Ms. TAUSCHER. What is your assessment of other countries' nuclear and strategic forces programs and intentions? How should they influence U.S. strategic forces policy and programs?

General CHILTON. The U.S. is the only nuclear weapon state party to the Nuclear Nonproliferation Treaty that is not in the process of modernizing its nuclear arsenal. Other countries are exercising the full weapons development cycle (design, develop, produce and assess) and have committed to modernization of their delivery systems, stockpiles and associated infrastructures. To maintain a credible deterrent, assure allies, and ensure a safe, reliable, secure nuclear stockpile the U.S. must maintain the capability to fully exercise this process. The U.S. nuclear enterprise infrastructure has atrophied during the past two decades and requires a near term commitment to recapitalize key production capabilities needed to sustain the deterrent. The nation has sustained its nuclear deterrent by extending the lives of aging Cold War strategic forces and relying on a large hedge of non-deployed legacy warheads to manage risk. While today's U.S. stockpile remains reliable, safe, and secure, concerns exist about long-term confidence in our aging weapons. We must explore options to increase the long-term confidence in our stockpile while also recapitalizing the infrastructure and reducing the large hedge of non-deployed weapons.

Ms. TAUSCHER. Do you see any risks to the U.S. moving lower than the Moscow Treaty's specified range of 1,700 to 2,200 operationally deployed warheads? What specific military conditions might make further stockpile reductions acceptable?

General CHILTON. Today's stockpile adequately addresses current policy and strategy goals, but we will incur additional risk if operationally deployed warheads are reduced below levels needed to address these goals. Without a production capability, we currently mitigate technological and geopolitical risk by maintaining a large hedge of non-deployed weapons. This year's Nuclear Posture Review (NPR), and Quadrennial Defense Review (QDR), will provide the national policy and strategy basis for defining future nuclear force structure, stockpile, and infrastructure requirements, and will consider current and potential future military conditions in their decisions.

Ms. TAUSCHER. Would a decrease in operationally deployed warheads to a range of 1,000 to 1,200 substantially change the investment required to maintain our nuclear arsenal?

General CHILTON. The nuclear posture review will examine this type of questions. However, because a significant portion of the infrastructure cost associated with maintaining the arsenal is fixed, an action to reduce operationally deployed war-

heads by itself would not significantly change the investment required. While a smaller stockpile and reduction in warhead types can reduce long-term operating and sustainment costs, investment is still required to retain core human capital and manufacturing capabilities inherent in a credible nuclear deterrent. In the short-term, deployed stockpile reductions may increase costs for warhead storage, transportation and dismantlement.

Ms. TAUSCHER. What impact, if any, would such a reduction in deployed warheads have on STRATCOM?

General CHILTON. It is anticipated that reduction in the number of nuclear weapons would be accompanied by a new strategy and guidance for optimizing the strategic deterrent forces to meet the U.S. national security requirements. As a result, USSTRATCOM would be tasked to develop and ultimately implement operational direction to the nuclear forces in coordination with force providers.

USSTRATCOM will continue its advocacy efforts to ensure delivery systems and warheads are highly reliable, leaving no doubt of their effectiveness or our ability to use them if directed by the President. As the number of weapons is reduced, the reliability of those that remain must be assured, and if possible, enhanced.

USSTRATCOM will continue to place great effort into ensuring the warheads are safe and secure, both to prevent accidents and to prevent unauthorized use. No matter the number of deployed warheads, nuclear surety will remain one of the central tenants of the nuclear enterprise.

USSTRATCOM must ensure that U.S. nuclear forces are ready, sufficiently diverse, and operationally flexible to provide the president with the necessary range of options for their use and as a hedge against the technological failure of any particular delivery system or warhead design.

Thus, as the number of deployed weapons decreases, USSTRATCOM will be a leading advocate to ensure the safety, security and reliability of the remaining stockpile. A strong stockpile stewardship program, coupled with a reinvigorated, albeit smaller, nuclear infrastructure, as well as sufficient weapon and platform diversity, will ensure the continued viability of the nuclear force to meet national requirements.

Ms. TAUSCHER. Please describe the process involved in setting requirements for the future nuclear force structure. What is STRATCOM's role? What obstacles or challenges might be impeding a more specific definition of military requirements for the future nuclear force structure?

General CHILTON. Setting future nuclear force structure requirements starts with the President's National Security Strategy. From this general guidance, the Secretary of Defense and Chairman of the Joint Chiefs develop the national military objectives for the Armed Forces. USSTRATCOM roles in this process include: advising as required during policy and strategy development, analyzing proposed force structures for military sufficiency and operational suitability, advocating for future capabilities that support national objectives, and developing operational plans from which force readiness requirements flow.

USSTRATCOM is one of several organizations who are responsible for ensuring a reliable, safe, and secure deterrent capability for the nation. To accomplish this, clear articulation of policy and strategy are needed. Without the creation of a responsive infrastructure and investments to sustain the human capital necessary to maintain long-term confidence in our nuclear deterrent, military requirements will need to consider the technical risk and geopolitical change associated with an aging stockpile.

Ms. TAUSCHER. Several alternatives have been proposed to sustain and/or modernize our nuclear weapons; these range from remanufacturing aging components to their original specifications to the reliable replacement warhead, as well as life extension programs and reuse concepts. From a military perspective, what are the benefits, challenges, and risks of these various alternatives?

General CHILTON. We must have long-term confidence in the reliability, safety and security of our stockpile. Warhead life-extension programs (LEPs) provide limited opportunity to improve reliability, safety or security, due to design constraints associated with our legacy warheads. There are materials used in legacy weapons that pose production challenges, and we are a number of years from an adequate capability to re-produce many components needed to sustain our stockpile. Reuse concepts that use components from the existing stockpile in different combinations may provide options for greater improvements in reliability, safety, and security but require additional study to fully explore designs, benefits and production requirements. Replacement warhead designs offer the opportunity to introduce the most significant improvements in reliability, safety, security and sustainability, but require a plutonium pit manufacturing capability in the near-term. LEP and reuse options will also require some level of pit manufacturing capability in the mid-to-long-

term as existing pits reach end-of-life. Regardless of the selected sustainment strategy, recapitalization of both uranium and plutonium research and manufacturing facilities and manpower are critical to the long-term stockpile sustainment of the deterrent.

Ms. TAUSCHER. In the wake of the Minot-Barksdale unauthorized transfer in 2007 and the nosecone misshipment to Taiwan in 2006, several reviews of the DOD nuclear enterprise were conducted. What is your assessment of the corrective actions taken to date? What would be your top priorities among recommendations that have not yet been implemented?

General CHILTON. USSTRATCOM has aggressively implemented corrective actions to address issues identified by various reviews of the DOD nuclear enterprise. In response to the recommendation that "The Commander, USSTRATCOM should assume responsibility for directing the operational effectiveness of U.S. nuclear forces and ensure the command is actively involved in monitoring the readiness of nuclear forces, including the synchronization of corrective action for deficiencies and improvements," CDR USSTRATCOM has established a Flag/General Officer position dedicated to directing day-to-day oversight of nuclear force operations and the command and control system. This officer is responsible to the Commander for managing nuclear readiness and assessment reporting, as well as oversight of the war planning system modernization. He is the lead for all nuclear functions across USSTRATCOM.

USSTRATCOM has established a Nuclear Enterprise Council, chaired by the Deputy Commander, which brings together USSTRATCOM's component and nuclear task force Commanders to identify, assess and monitor emerging issues with potential to impact the nuclear mission and to make recommendations on nuclear matters to the Commander, USSTRATCOM.

The USSTRATCOM Nuclear Enterprise Board is a working body dedicated to supporting the USSTRATCOM nuclear mission and advocacy roles. Specifically, this forum reviews assessments that judge compliance with U.S. nuclear weapons command and control, safety, and security directives, and oversees training and readiness assessments of Headquarters, USSTRATCOM; service components; task forces and Joint Functional Component Commands to support the USSTRATCOM mission and provides recommendations to the Nuclear Enterprise Council.

USSTRATCOM has also taken action to observe all nuclear-related inspections, and taken steps to increase the rigor of command-level exercises. To that end, it would be beneficial for USSTRATCOM to partner with the Under Secretary of Defense for Policy and the Chairman of the Joint Chiefs of Staff to initiate a series of senior seminar wargames to enhance understanding of nuclear deterrence and to revalidate current strategies or develop new strategies and operational concepts regarding the role of nuclear weapons in deterrence.

Ms. TAUSCHER. What are the military's requirements for mid-term and long-term PGS capabilities?

General CHILTON. USSTRATCOM requires a capability to deliver prompt, precise, conventional kinetic effects at intercontinental ranges against strategic, high-value, time-sensitive targets. A prompt global strike capability will provide greater flexibility for National leadership and is most appropriate when there is a serious threat to national security and time to position other forces is not available. We are focused on maturing technologies to field a system and close the capability gap as soon as possible, leveraging technology developments in the PGS Defense-wide account to reach a full operational capability.

Ms. TAUSCHER. Can you comment on potential scenarios where a PGS capability would be used?

General CHILTON. Prompt global strike will be useful in any scenario where a rapid, non-nuclear kinetic response is either the most appropriate and/or most tactically feasible option to strike a target and conventional forces are unavailable or cannot quickly respond to the situation. In that capacity, a prompt global strike capability will provide greater flexibility to National leadership facing serious threats to national security when conventional forces are unavailable or cannot quickly respond to the situation.

The National Academy of Sciences (NAS) 2008 report on conventional prompt global strike developed several credible scenarios based on material provided by Department of Defense officials, historical experience with actual or seriously contemplated strikes, and intelligence projections. The scenarios include the need to strike a ballistic missile launcher poised to launch a weapon of mass destruction (WMD) at the U.S. or allies; an opportunity to strike a gathering of terrorist leaders or a shipment of WMD during a brief period of vulnerability; and the need to disable an adversary's command-and-control capability as the leading edge of a broader

combat operation. The NAS report is comprehensive and validates the conventional prompt global strike capability gap.

Ms. TAUSCHER. Are current joint space programs with the intelligence community adequately supporting warfighter intelligence requirements? How might you change the investment strategy to better support the warfighter in theater?

General CHILTON. Today's warfighter intelligence requirements are a function of the fast-moving, quickly-evolving operations on the ground, which challenge the ability of our current joint space programs to respond in real-time to changing situations requiring immediate, concise, and comprehensive updates. Our existing ability to collect data is unsurpassed, yet we lack sufficient automated analysis and processing capabilities to push fused information within tactically relevant timeframes to the warfighter.

Our strategy must focus on processing, exploitation, and dissemination (PED) through machine-to-machine interface that provides combatant commanders direct access to fused intelligence information. This may address future warfighter intelligence support needs. To accomplish this strategy, we seek to improve support to the warfighter in theater through our advocacy role for space capabilities and Combatant Commander level Senior Warfighter Forum (SWARF) review and validation of intelligence requirements. Additionally, we participate in forums that include the intelligence community in balancing capability requirements. Today, requirements are being met to the best of our existing abilities and capabilities. However, the ability to meet future warfighter needs could be adversely impacted by procurement and acquisition challenges.

Ms. TAUSCHER. Please describe the potential operational concepts and value that you see "operationally responsive" space (ORS) solutions providing. What is your assessment of the ORS program office implementation and its responsiveness to warfighter needs?

General CHILTON. Potential operational concepts from ORS solutions involve augmentation and first-response reconstitution of the most critical products and services provided by our space capabilities today. In response to stated COCOM needs, particular emphasis within ORS is on rapid reconstitution and augmentation in the space mission areas of ISR and communications.

The value of ORS solutions lies in providing a third supporting and responsive element to our National Security Space portfolio. ORS solutions will be designed to be complementary to the existing and planned space systems and to the use of purchased commercial space products and services that will together meet the bulk of our national military space needs. ORS has a mix of attributes—responsiveness, flexibility, affordability, and assuredness—that are unique relative to these other two approaches (USG systems and commercial space).

USSTRATCOM has been actively engaged with the ORS Office for the past 18 months in providing Joint Force Commander urgent needs for space effects. In that time, we have requested ORS assessment of three different needs—UHF communications augmentation, Space Situational Awareness (SSA) of the geosynchronous belt, and a specific type of ISR product in support of USCENTCOM. In each case, we have been satisfied with the effectiveness and responsiveness of the ORS process and with the breadth of solution options.

Ms. TAUSCHER. What is our national and military policy if our space assets are attacked? Do we have clear "red lines" or thresholds for attacks against our space assets? What are the merits of a declaratory policy that signals our intent and lays out consequences?

General CHILTON. The United States views the proliferation of anti-satellite weapon systems with grave concern for several reasons: the implied threat to free use of space for peaceful use by nations, the collateral effects of employment of such capabilities on the safety of human space flight and on satellite operations.

Regarding "red lines," the National Space Policy provides general guidance. The United States considers space capabilities—including ground and space segments and the links between them—vital to its national interests. The United States considers its and other states' space systems to have the rights of unhindered passage through, and operations in, space without interference. Any purposeful interference with these assets will be interpreted as an infringement of our rights and considered an escalation in any conflict or crisis. The United States reserves the right to defend and protect its space systems with a wide range of options.

We do not favor a black and white declaratory policy. There is no sure declaration that would cover the "whole of Government" scenario responses and we would risk our credibility if we failed to respond as formally stated. Historically, the U.S. has maintained a declaratory policy to allow senior leadership flexibility in their response to infringements on our stated vital interests.

Ms. TAUSCHER. What are the merits of "rules of the road" and/or codes of conduct in space?

General CHILTON. Given the increasing use of space, frequent calls have been made for "Rules of the Road," a "Code of Conduct," or "Best Practices Guidelines" for conducting space operations. The U.S. Department of State's naming convention recommends we refer to any proposed guidelines as "Best Practice Guidelines." Proposals of this type may be described as providing "a common understanding of acceptable or unacceptable behavior within a medium shared by all nations." The U.S. received a third draft "EU Code of Conduct" following approval by EU ministers 2008 and the Department of Defense is leading the U.S. Government. The United States will play a leading role in advancing transparency and confidence building measures (TCBMs) relating to space activities. Such TCBMs can help increase transparency regarding governmental space policies, strategies and potentially hazardous activities. This can help to reduce uncertainty over intentions and decrease the risk of misinterpretation of miscalculation.

Ms. TAUSCHER. The head of Army SMDC has said that within three years, China may be able to challenge the U.S. at a "near-peer level" in space. What are STRATCOM and DOD doing to ensure that the U.S. military will maintain its access to space, to defend U.S. interests in space, and to engage in mutual threat reduction measures?

General CHILTON. As clearly articulated in the National Space Policy, the United States is committed to the exploration and use of outer space by all nations for peaceful purposes, and for the benefit of all humanity. While other nations expand their access to space and space services, we must actively maintain our own access to space and we must defend our interests in space. We continue to advocate for an improved Space Situational Awareness (SSA) capability as a key enabler to support access to space. In defense of our space capability, space protection efforts by USSTRATCOM, Air Force Space Command (AFSPC)-National Reconnaissance Office (NRO) Space Protection Program, and others are being broadened to ensure adequate protection of the military, civil and commercial space sectors that support U.S. national security and ensure continued access to and freedom of action in space. We are also developing Operationally Responsive Space concepts and technologies that can be employed to rapidly supplement or reconstitute space forces.

USSTRATCOM and DOD continue to advocate for spaceflight safety and minimization of space debris to reduce the threat to our on orbit assets. As USSTRATCOM assumes responsibility for space surveillance information sharing as currently executed under the Air Force's Pilot Program for Commercial and Foreign Entities (CFE), USSTRATCOM will share Space Situational Awareness information, as appropriate, and encourage responsible activities in space to mitigate risk through a cooperative arrangement.

Ms. TAUSCHER. Is the national security space community adequately organized and managed to address the challenges ahead in space security and space acquisition?

General CHILTON. The recent report to Congress entitled "Report to Congress of the Independent Assessment Panel on the Organization and Management of National Security Space" (Young Panel) provided an assessment on this issue.

As the single point of contact for military space, USSTRATCOM is responsible for planning and conducting space operations and advocating for space capabilities. We provide military representation to U.S. national agencies, commercial entities and international agencies for matters related to military operations and manned space flight. Additionally, our diverse security cooperation, space situational awareness, and warning and attack assessment activities necessitate a whole-of-government approach that highlights the need for strong leadership and synchronized actions both in acquisition and in operations governmentwide.

Ms. TAUSCHER. Can you provide us an update on the new global missile defense concept of operations that STRATCOM is developing in conjunction with the other COCOMs?

- What are the key elements of the new CONOPS?
- Does it change any of STRATCOM's existing authorities with regard to missile defense?

General CHILTON. STRATCOM JFCC IMD is completing a final review of the Global Missile Defense CONOPS across DOD, prior to submission to the CJCS and SECDEF for review and approval. A collaborative planning process is designed in to address specified ballistic missile threats. The CONOPS will additionally serve as a framework for developing Geographic Combatant Commander MD plans and for integrating allied and coalition partner capabilities into the U.S. Missile Defense architecture. The CONOPs includes methods for responding to the dynamic situa-

tion of theater campaigns with recommendations for the allocation of capabilities; as well as the integration of tracking and defensive operations support. The Global Missile Defense CONOPS does not change any of USSTRATCOM's existing authorities which are set by the UCP.

Ms. TAUSCHER. In 2006, the Joint Staff completed a study identifying the force structure needs for upper tier missile defense systems, *i.e.,* Aegis BMD and THAAD. What are the force structure needs for other missile defense systems, such as Patriot, Ground-based Midcourse Defense, and sensors?

General CHILTON. Joint Integrated Air and Missile Defense Organization (JIAMDO) completed a Joint Capability Mix Study that identified upper-tier missile defense needs. A review of the process for determining force structure and inventory needs will take place within the larger strategy and policy review directed by Section 234 of the National Defense Authorization Act (NDAA) for Fiscal Year (FY) 2009. This effort will occur over the next year.

Ms. TAUSCHER. Last year, Congress directed the Department of Defense to develop an overarching plan for setting missile defense force structure and inventory requirements, which is due by April 15, 2009.

- Can you provide the committee an update on the status of that report?
- What role will STRATCOM and other COCOMs play in this process?

General CHILTON. OSD (AT&L) was assigned responsibility for this action and STRATCOM and the other combatant commands have been fully involved in the plan development.

Ms. TAUSCHER. In 2004, STRATCOM conducted a Military Utility Assessment (MUA) of the initial set of Ground-based Missile Defense (GMD) capabilities deployed in California and Alaska to determine their militarily effectiveness.

- How confident are you in current GMD system capabilities?
- Do you have any plans to conduct another MUA of the GMD system?
- If so, when do you expect to have the MUA completed?

General CHILTON. We continue to have confidence in Ground-Based Midcourse Defense (GMD) capability. This confidence is based on experience in day-to-day operations, operability demonstrations, and numerous flight and ground tests including the Dec 08 successful intercept of a threat class target with a ground-based interceptor launched from Vandenberg Air Force Base, California.

USSTRATCOM conducts BMDS Military Utility Assessments (MUAs) annually. The most recent, dated 31 Mar 08, reflects system status as of 31 Dec 07.

Ms. TAUSCHER. Please update us on missile defense international cooperation efforts. Where do you see as the greatest opportunities for international collaboration and integration?

General CHILTON. We are currently cooperating with international partners, both in real-world operations, as well as in future wargames and experimentation.

Consultations and collaborations were conducted with several nations during the recent launch by North Korea of a TD-2 class missile. We have been supporting the USEUCOM deployment of an AN/TPY-2 radar to Israel and preparations for JUNIPER COBRA 09 exercise, and have provided supporting expertise in planning for potential deployments of European interceptors and midcourse radar.

USSTRATCOM's component, JFCC IMD, is leading an eight nation future missile defense policy war-game called NIMBLE TITAN 2010, in which we have been exploring higher-level policy issues and ramifications for coalition missile defense in discrete steps. We recently completed a Limited Objective Experiment in March 09, which was a Policy workshop with State and Foreign Affairs treaty and legal experts from all eight player nations, as well as NATO's International Military Staff. The wargame is scheduled for April 2010. We have also been involved in Joint Project OPTIC WINDMILL (JPOW), which is a Dutch-German-led exercise that integrates operations of missile defense units, such as European PATRIOTs with higher level C2 systems. JPOW continues to be an excellent mechanism to explore possible NATO integration with U.S. BMD capabilities at the tactical and operational level. These two wargames, as well as exercises with our Pacific allies, continue to be our most significant venues for international warfighter cooperation.

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