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**STATUS OF THE AIR FORCE
NUCLEAR SECURITY ROADMAP**

HEARING

BEFORE THE

STRATEGIC FORCES SUBCOMMITTEE

OF THE

COMMITTEE ON ARMED SERVICES
HOUSE OF REPRESENTATIVES

ONE HUNDRED ELEVENTH CONGRESS

SECOND SESSION

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STATUS OF THE AIR FORCE NUCLEAR SECURITY ROADMAP

HOUSE OF REPRESENTATIVES,
COMMITTEE ON ARMED SERVICES,
STRATEGIC FORCES SUBCOMMITTEE,
Washington, DC, Thursday, January 21, 2010.

The subcommittee met, pursuant to call, at 10:10 a.m., in room HVC-210, Capitol Visitor Center, Hon. James R. Langevin (chairman of the subcommittee) presiding.

OPENING STATEMENT OF HON. JAMES R. LANGEVIN, A REPRESENTATIVE FROM RHODE ISLAND, CHAIRMAN, STRATEGIC FORCES SUBCOMMITTEE

Mr. LANGEVIN. Good morning. This hearing of the Strategic Forces Subcommittee will come to order.

Today's hearing will review the Air Force's progress in revitalizing its nuclear enterprise following the serious incidents involving nuclear weapons and weapons-related components that occurred or came to light between August 2007 and March 2008.

Those incidents spawned numerous investigations into, and assessments of, Air Force and Department of Defense [DOD] nuclear security procedures.

In Congress and in the Pentagon, these incidents were recognized as indicators of deterioration in the structure, procedures, culture and leadership of the Air Force's nuclear enterprise that had evolved over more than a decade. So at a more basic level, the purpose of this hearing is to examine how well the Air Force is doing addressing these fundamental concerns.

Given the significance of these issues, I think it is fitting that this is our first hearing of the year and, indeed, the first hearing I have chaired since becoming chairman of the subcommittee.

In that context, I am very pleased to welcome our three very distinguished witnesses:

Lieutenant General Frank G. Klotz, Commander, Air Force Global Strike Command; Major General C. Donald Alston, Assistant Chief of Staff, Strategic Deterrent and Nuclear Integration, Headquarters, U.S. Air Force; and Brigadier General Everett H. Thomas, Commander, Air Force Nuclear Weapons Center, Kirtland Air Force Base.

In his report into the Minot-Barksdale transfer more than a year ago, Major General Doug Raaberg stressed maintaining custody and control over our nuclear weapons is about people executing their responsibilities properly, which is in turn based on training, supervision, and leadership.

The several reviews that followed both the Minot-Barksdale transfer and the mistaken shipment of sensitive missile components to Taiwan also stressed training, supervision, and leadership.

These reviews, including the report ordered by Secretary Gates, focused on the need for better organizational structure and accountability. Indeed, the Air Force's recovery roadmap created the positions occupied by our witnesses—General Klotz as Commander of Global Strike Command, General Alston as the integrator of all things nuclear on the Air Staff, and General Thomas' responsibility with Air Force Materiel Command for all nuclear weapons sustainment.

Each of these changes was designed to demonstrate the Air Force's increased focus on the nuclear mission.

As significant as these changes are, however, nuclear inspection results over the course of 2009, and changes in command late last year at some of our ICBM [Intercontinental Ballistic Missile] bases underscore the degree to which training, supervision, and leadership remain fundamental challenges for the Air Force.

At the end of the day, it is our airmen that keep our Air Force strategic weapons safe and secure. So I look forward to hearing what the Air Force is doing to improve the training, supervision, and leadership of our airmen.

With that, let me now turn to our ranking member, Mr. Turner, for any opening comments that he may have. Thank you, Mr. Turner.

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

Mr. TURNER. Thank you, Mr. Chairman.

I first want to recognize you in your first hearing as chairman of the Strategic Forces Subcommittee. I have had the pleasure of working with our chairman for several months now, and I look forward to our continued joint efforts of oversight on the subcommittee. I also look forward to learning more of the chairman's priorities, one of which I know is the concern of our vulnerability for cyber-attacks. I look forward to your leadership on the committee.

Today's hearing on the Air Force nuclear enterprise is a topic of strong bipartisan concern. Nuclear weapons safety and security are of paramount importance. There is no margin for error. Yet, 2 years ago, there were serious errors. In August 2007, nuclear weapons were mistakenly transferred aboard a B-52 from Minot to Barksdale Air Force Base. Roughly 7 months later, the committee learned about the misshipment of ICBM nose cones to Taiwan.

Several high-level internal and independent reviews followed. The Secretary of Defense Task Force on DOD Nuclear Weapons Management, led by Dr. James Schlesinger, concluded, "There has been an unambiguous, dramatic, and unacceptable decline in the Air Force's commitment to perform the nuclear mission and, until very recently, little has been done to reverse it."

The severity of these incidents led to Secretary Gates' direct intervention in his commitment to "correcting the systemic and in-

stitutional nuclear weapons stewardship problems that have been identified.”

Significant leadership and organizational changes were made within the Air Force. Three new organizations were established—Global Strike Command, A-10, and the Nuclear Weapons Center—each of which are represented by our witnesses today. A Nuclear Security Roadmap containing a comprehensive set of corrective actions was developed.

However, mishaps continue to plague the Air Force nuclear enterprise. In October, two wing commanders at Minot were relieved of duty in response to continued lapses in procedure and security. Headlines continue to be made with nuclear units that receive unsatisfactory ratings on their nuclear surety inspections.

We understand that changes take time, and the progress being made by the Air Force is certainly commendable. However, we also need to understand why, 16 months after the release of the roadmap, that these incidents continue. What challenges and impediments to roadmap implementation remain?

Leadership and organizational changes cannot be effective without cultural change. As the Schlesinger report noted, “An essential element of leadership involves inspiring people to feel they are doing important work and are valued for it.”

I would appreciate our witnesses’ thoughts on how to change that culture and how to sustain those changes. I know that has been a substantial focus of your efforts. We certainly appreciate your work and look forward to your success.

I am also interested in how the Air Force cultivates its next generation of nuclear leaders and experts. Is the nuclear mission an attractive career field for airmen, particularly as policymakers seek to shrink it?

The various reviews highlighted a particular concern with positive inventory control of nuclear weapons and nuclear-related components. I share this concern. I believe this is an area where technology can play a greater role, rather than just brute force methods. The challenge, however, is moving from ideas and basic research to fielding solutions that can have an immediate effect on improving nuclear inventory control.

Lastly, I think it is noteworthy that this renewed focus has led to greater advocacy and involvement by the Air Force in the Nation’s nuclear policy and posture. Several Air Force-related nuclear forces issues require decisions and/or investments in the next few years, such as the B-61 Life Extension Program, the Next-Generation Bomber and a potential ICBM follow-on.

I hope that the Nuclear Posture Review that the Administration will soon release will lay the groundwork for addressing these key Air Force nuclear issues and investments. I would be interested in our witnesses’ thoughts on how improvements made to the Air Force nuclear enterprise will assist in these decisions.

There is no doubt in my mind that our witnesses here today—General Klotz, General Alston, and General Thomas—have an incredibly tough job. I want to thank each of you for your service to our Nation. You are in these leadership positions because the Department and we are confident in your abilities to reinvigorate the enterprise.

I look forward to your testimony. Thank you.

Mr. LANGEVIN. I thank the ranking member. Mike and I worked together for quite a few years on the Armed Services Committee, and I am looking forward to our continued working relationship. Thank you.

With that, in consultation with our witnesses, we are going to go not in rank order, but in more of chronological order, in the terms of Air Force's efforts to revitalize the nuclear mission. We will start with General Alston, then move to General Thomas, and conclude with General Klotz.

General Alston, the floor is yours.

STATEMENT OF MAJ. GEN. C. DONALD ALSTON, USAF, ASSISTANT CHIEF OF STAFF, STRATEGIC DETERRENT AND NUCLEAR INTEGRATION, U.S. AIR FORCE

General ALSTON. Mr. Chairman, Ranking Member Turner, members of the committee, thank you for this opportunity to discuss Air Force strategic deterrence programs and the progress the Air Force has made reinvigorating the Air Force nuclear enterprise.

Nuclear systems require uncompromising mission focus, and I am proud to represent the Air Force with two leaders who have brought that level of focus to their duties throughout their distinguished careers: Lieutenant General Frank Klotz, the Commander of Air Force Global Strike Command, our newest major command, executing arguably our longest-standing mission; and Brigadier General Everett Thomas, who has been driving major changes throughout his tenure as the Commander of the Air Force Nuclear Weapons Center.

Reinvigorating the Air Force nuclear enterprise has been the Air Force's top priority for the past 18 months. The foundation of our effort was a comprehensive roadmap titled "Reinvigorating the Air Force Nuclear Enterprise." This roadmap was a product of an Air Force Task Force that analyzed and integrated the findings and recommendations of a series of reviews of our processes and performance by expert distinguished national leaders.

Under the direct leadership of the Secretary of the Air Force and the Chief of Staff, we have been on an urgent but deliberate path to not only correct deficiencies but to set the conditions for renewed proactive stewardship of this vital mission area. We have made significant structural changes, both in the field and at headquarters. We have made extensive process changes from resourcing the mission to inspections. And as the changes take root, we expect to see long-term cultural impact across the enterprise.

The credibility of our strategic deterrent depends on capable systems and competent people. Consistent, precise, and reliable performances by our forces to our uncompromising standards, together with safe, secure, and reliable deterrent systems, are the daily objectives of our fielded forces.

My role is to support those forces as they require and to integrate air staff efforts to ensure success across the Air Force nuclear enterprise. Daily success deters adversaries and assures our allies. Despite comparable success over the past 18 months, there is still work to be done.

I look forward to your questions. Thank you.

[The prepared statement of General Alston can be found in the Appendix on page 33.]

Mr. LANGEVIN. Thank you, General Alston.
General Thomas, the floor is yours.

STATEMENT OF BRIG. GEN. EVERETT H. THOMAS, USAF, COMMANDER, AIR FORCE NUCLEAR WEAPONS CENTER, U.S. AIR FORCE

General THOMAS. Mr. Chairman, Ranking Member Turner, distinguished members of the Strategic Forces Subcommittee, thank you for this opportunity to discuss the current state of the Air Force's nuclear sustainment efforts.

On behalf of a dedicated team of military, civilian, and industry professionals, I am pleased to report our sustainment and stewardship of nuclear weapons and support equipment is much improved since 2007. Our progress to date is a direct result of the continuing evolution of the Air Force's vision to address gaps in the nuclear enterprise as far back as 2003, when a series of reports highlighted the need for a single manager for nuclear weapons sustainment. Thanks to the strong, unwavering leadership of Secretary Donley, General Schwartz, General Hoffman, and many others, including my fellow general officers here today, we have made considerable progress toward creating a center of excellence with a singular responsibility that is nuclear sustainment.

This realignment is reminiscent of the Air Force plans dating back to 1949. This is profound in that since 1992, following the deactivation of Strategic Air Command, there was no single four-star officer charged with understanding and articulating the needs of the Air Force with regard to nuclear sustainment below our Chief of Staff.

Today, the Commander of Air Force Materiel Command, General Donald Hoffman, is vested with this authority. In addition, I am accountable for day-to-day nuclear sustainment issues and partnerships with all of the Air Force Materiel Command centers and with oversight of an entire MAJCOM, major command staff. Together, we keep our Secretary, Chief of Staff, and our Air Force warfighting customer, General Klotz, informed and engaged in the sustainment of nuclear weapons, delivery vehicles, and associated support equipment.

In addition, we have gained approval to establish a flag-level Air Force Program Executive Officer, or PEO, for Strategic Systems in direct acknowledgment of the Schlesinger report's recommendations. This PEO for Strategic Systems will ensure future acquisition efforts are properly aligned with near-term sustainment challenges. To ensure these efforts remain integrated and synchronized with day-to-day operations and sustainment, the new PEO will be co-located with the Air Force Nuclear Weapons Center at Kirtland Air Force Base, New Mexico.

Let me assure you that all we have done over the past few years and all we will do over the coming years is driven by renewed commitment to the oldest, highest, most fundamental and most demanding tenet of nuclear capability—surety—that we deliver safe, secure, reliable nuclear capability to Air Force Global Strike Command.

I look forward to discussing with you our gains in direct support to the warfighter, our growing partnerships, efforts we have made in gaining positive inventory control of nuclear weapons-related material, and our work to prepare for the future.

I have a written statement that goes into more detail. With your permission, we would like to enter it into the record.

Again, thank you for this opportunity and for all this committee is doing to support our strategic forces.

I look forward to answering your questions.

[The prepared statement of General Thomas can be found in the Appendix on page 40.]

Mr. LANGEVIN. Thank you, General Thomas.

General Klotz, I look forward to your testimony. Welcome.

STATEMENT OF LT. GEN. FRANK G. KLOTZ, USAF, COMMANDER, AIR FORCE GLOBAL STRIKE COMMAND, U.S. AIR FORCE

General KLOTZ. Good morning, Mr. Chairman, Ranking Member Turner, and distinguished members of the committee.

It is an honor to appear before you for the first time as the Commander of Air Force Global Strike Command. In fact, this is the first hearing that any member of Air Force Global Strike Command has ever testified before. I thank you for the opportunity to discuss the current status of the Air Force's newest major command.

Now, as you know, Air Force Global Strike Command was established as part of a broader roadmap developed by Secretary of the Air Force Michael Donley and our Chief of Staff General Norton Schwartz to refocus our attentions and our efforts on the nuclear enterprise and to ensure that as long as nuclear weapons are part of our national strategy that they will remain safe, secure, and reliable.

Now, the command itself is being established and stood up in a very systematic step-by-step approach. The first step was to stand up a provisional command just over a year ago at Bolling Air Force Base here in Washington, D.C., under the leadership of then-Brigadier General, now Major General Jim Kowalski, who now serves as the Vice Commander of Global Strike Command. Its principal tasks were to develop the initial planning documents, to define manpower requirements, and to begin assigning people to Global Strike Command.

The next step took place on August 7, when General Schwartz formally activated Global Strike Command in a ceremony at Barksdale Air Force Base in Louisiana, the permanent site of our new headquarters.

Since then, the Command has followed a detailed plan to bring all of the Air Force's long-range nuclear-capable forces under a single major command.

In executing this comprehensive plan, Global Strike Command develops and provides combat-ready forces for nuclear deterrence and global strike operations in support of the President and the combatant commanders.

Now, the first actual transfer of forces occurred on the 1st of December when Global Strike Command assumed responsibility for the intercontinental ballistic missile mission. Under the new com-

mand arrangements, 20th Air Force, which is headquartered at F.E. Warren Air Force Base in Wyoming, and its three ICBM wings—the 90th at F.E. Warren Air Force Base, the 341st at Malmstrom Air Force Base in Montana, and the 91st at Minot Air Force Base in North Dakota—now all fall under Global Strike Command.

On the same day, Air Force Global Strike Command also took charge of the ICBM test mission of the 576th Flight Test Squadron near Vandenberg Air Force Base in California and the targeting analysis mission of the 625th Strategic Operations Squadron at Offutt Air Force Base in Nebraska.

In just 10 days, on the 1st of February, the transfer of forces to Global Strike Command will be complete as our new command assumes responsibility for 8th Air Force and the long-range, nuclear-capable bomber mission from Air Combat Command. Eighth Air Force headquarters is also located at Barksdale Air Force Base, Louisiana, and exercises command over two B-52 wings, the wing there at Barksdale itself as well as the wing at Minot Air Force Base in North Dakota, and it also exercises command over the B-2 wing at Whiteman Air Force Base in Missouri.

Global Strike Command will achieve full operational capability later this summer, 2010, with about 900 people on board at our headquarters at Barksdale Air Force Base and nearly 23,000 people in the entire Command.

As the other two—my two colleagues have said, nuclear deterrence and global strike forces of the Air Force remain vitally important to the Nation as well as to our friends and allies around the world. For the men and women of Air Force Global Strike Command, that means we have an extraordinarily important mission, noble and worthy work to perform and work that demands the utmost in professionalism, discipline, excellence, pride, and esprit.

The new Command also reflects the Air Force's firm and unshakeable conviction that strategic nuclear deterrence and global strike operations are a special trust and responsibility, one that we take very seriously. This Command will serve as the single voice to maintain the high standards necessary in stewardship of our Nation's strategic nuclear deterrence forces.

Like General Thomas, I have a longer written statement that I would like to enter into the record.

I would like to thank you again, Mr. Chairman, for the opportunity, and other members of the committee, for the opportunity to present today the status of Air Force Global Strike Command. Thank you, sir.

[The prepared statement of General Klotz can be found in the Appendix on page 48.]

Mr. LANGEVIN. Very good. General, thank you for your testimony.

I am going to thank the panel for their testimony.

Before I begin with my questions, I also want to welcome our colleague, Representative Fleming, to the hearing. Welcome. While not a member of the subcommittee, Mr. Fleming has a strong interest in these issues, I know. No wonder, since his district is home to Barksdale Air Force Base, home of Global Strike Command.

So, Representative Fleming, welcome to this hearing this morning. Once each of the subcommittee members have had a chance

to ask questions in turn, we will turn to you to also be able to ask some questions, without objection.

Dr. FLEMING. Thank you.

Mr. LANGEVIN. With that, I would like to begin with a question for General Alston.

General Alston, you have described Air Force organizational changes associated with the Nuclear Security Roadmap as consisting of “three big muscle movements” in your testimony: the creation of your position within the Air Force headquarters, the consolidation of all nuclear weapons sustainment activities at the Nuclear Weapons Center in Albuquerque, and the standup of Global Strike Command. My question is, how do you assess the impact of these changes at this stage?

General ALSTON. Thank you, Mr. Chairman.

I think that we have, despite there just being 18 months since we began this effort with the Secretary of the Air Force, with Mr. Donley taking responsibility as the Secretary of the Air Force and with Major General Schwartz stepping up to become Chief of Staff, we established the A-10 function, my Office of Strategic Deterrence and Nuclear Integration on the first of November, 2008, and we had essentially the opportunity to go through a budget cycle with my office being able to contribute to that part of the cycle and leverage the changes that we have made to the resourcing process that the Air Force has.

There has been a change to that where we have established a nuclear operations panel that enables or ensures that we are thoroughly working through all of the nuclear-related requirements. I have a seat at the table throughout that process from one end all the way to the culminating piece of that, which is the Air Force Council which makes recommendations to the Chief and Secretary. So my office has been able to wade into that, as the Chief and Secretary have intended that we would be able to do.

The Air Force Nuclear Weapons Center has a legacy that is a few years old, but they have been growing in numbers, virtually tenfold over the course of these 18 months, to fulfill all of the responsibilities that we have levied upon them to take full responsibility for all of sustainment of our nuclear systems.

General Thomas can speak to that more thoroughly than I can, but the integration of his efforts and the long-range planning that he has already been able to contribute to our processes has enabled us to start to get a footing on examining the issues related to the—what it is going to take to sustain the Minuteman III to 2030 and beyond. And that is already—he has already produced a roadmap that we continue to refine but is already contributing to the Air Force corporate process and are stepping up to the stewardship responsibilities that we have.

In my organization, we also created a requirements division. And because at this point in time General Klotz will grow the capacity to be the requirements driver for the nuclear enterprise, at this time filling that void, I have the capacity to contribute to that. And because my office was stood up, we have been able to complete a capabilities-based assessment of our follow-on airlines cruise missile capability, and it is going through the requirements develop-

ment process this spring, and then analysis of alternatives will begin in the fall.

So I think that—and now Global Strike Command, on time and on target, taking responsibility for the ICBM mission on the 1st of December and now within a couple of weeks fulfilling the organizational alignment on the 1st of February with 8th Air Force nuclear-capable bombers coming over, we can already see the tangible changes that the Secretary and the Chief had intended being manifested in the actual consequential work that we are all getting the chance to do.

Mr. LANGEVIN. In each of these changes, can you give me your assessment? Are each of them at your highest confidence level, the changes that were made, still some work in progress, or are they at your highest confidence level?

General ALSTON. Sir, my organization was probably at about 40 people in April, and I am at about 120 right now. I am just finishing the hiring of civilians. So all of my uniformed forces have arrived. But they, too, need to be cultivated, and they need to be oriented on the challenges that are in front of us. So it is a work in progress in terms of me really finding my full stride. I have got the responsibility, and I have got critical mass to get my job done.

I will leave my two colleagues to describe their assessment of the maturity of their parts of this enterprise.

But as I have heard the Chief say, airmen didn't fail the Air Force when they had these breakdowns; the Air Force failed our airmen. And we had not given the enterprise the attention that nuclear missions demand, and this has gone on for an extended period of time.

So these organizational changes that we are making are very important. But without the leadership and the prioritization by the Chief and the Secretary, and without that prioritization being carried out at every level of our Air Force, I don't think that the organizational changes in and of themselves will carry the day.

So I think it is that continued focus by our leadership at all levels, and the absolutely unambiguous clarity that the Chief and Secretary have given the nuclear mission, that is really the principal driver to the advancements that we have made so far.

Mr. LANGEVIN. Very good.

Well, for any of the generals at the table, I would like to ask a question about what I will call inventory control. Can you tell me what the current state of the Air Force inventory control over our nuclear weapons within its control is right now? For instance, is the Air Force able to identify where each of the nuclear weapons within its control is at any given moment?

General THOMAS. Mr. Chairman, I will be happy to answer that one for you.

The short answer is, yes, sir. Upon standing up the Air Force Nuclear Weapons Center and robusting it up under Secretary Donley and General Schwartz, our peer view, the charge I had immediately was to understand on a day-by-day basis where every nuclear weapon was in the Air Force, to include if it was going to move, where it was going to move, time, location, how it was going to move.

So I have that responsibility, and I take it very seriously. Every week, I get an update; and if there is an out-of-schedule movement, we review the update. We funnel that update to our counterparts in Global Strike Command and General Alston. My boss, General Hoffman, immediately gets an update; and so, ultimately, the Chief, General Schwartz, and the Secretary of the Air Force are updated on weapons movement.

It is a pleasure of mine to be involved in that, and it goes back to a statement by Ranking Member Turner is how are we communicating down to the youngest airman that this is an important mission? That is one of them, by my daily involvement in it, by me being able to communicate to a unit that is moving a weapon, the importance of ensuring that we have accountability, not just visual accountability but the documentation that is done through our information, technology systems, and personal visits.

I personally would like to thank the ranking member for visiting Kirtland Air Force Base and taking the time. And even though Congressman Heinrich lives there, he also takes an opportunity to come out and visit us. So those are the kinds of things that we are, as my colleagues say, inculcating from weapons storage, weapons movement, weapons maintenance, weapons locations, kind, and tracking.

Mr. LANGEVIN. Can you talk about how we maintain operational security so that when nuclear weapons are moving only those who need to know do know?

General THOMAS. Well, security safety resource protection is kind of several layers. I am involved in just the security requirement, required security in the event that we do move a weapon. That is the only time I really get involved. I am involved in security systems inside the weapons storage areas from a perspective that the right amount of security guarantee that weapon.

But normally I don't get involved in day-to-day security that surrounds the external part of a weapons storage area or a launch facility or a flight line. I would be happy to take that question and get some help from our colleagues and security professionals on who watches the day-to-day security.

Mr. LANGEVIN. I would appreciate that, for the committee.

[The information referred to can be found in the Appendix on page 57.]

Mr. LANGEVIN. Recognizing, then, that we are in open session, can you talk about how much progress was made in leveraging technology to assist personnel in executing inventory control, for example, bar codes or something analogous?

General THOMAS. Mr. Chairman, I would be happy to answer that.

Prior to standing up the Air Force Nuclear Weapons Center robust and along with our partners in Air Force Global Logistics Support Center, we were failing in what I call automatic tracking systems and applied to what we have now defined as nuclear weapons-related material.

Every component now that comes to the Air Force either is coming from industry or we are bringing it back, for instance, taking it off, for example, an assembled Intercontinental Ballistic Missile or off an aircraft now is bar coded with what we call a unique iden-

tifier. That unique identifier is then loaded into our supply system, either in the Defense Logistics Agency supply IT or into a separate entity for the United States Air Force as we begin what we call our positive inventory control, fusion that will eventually lead into our expeditionary combat supply system.

From that, we can track through that IT fusion at the Air Force Global Logistics Support Center or at the Air Force Nuclear Weapons Center exactly the kind, condition, location of every nuclear weapon-related material component that moves through the system. Prior to that, we didn't have this, and this is still coming to us. We are improving on it on a daily basis.

Mr. LANGEVIN. Thank you, General.

With that, I will now turn to the ranking member for questions. Mr. Turner.

Mr. TURNER. Thank you, Mr. Chairman.

Once again, I want to thank each of you, because you have taken on a task where there were a number of problems. You had to do an assessment, you have to try to respond to the criticism, and you have to bring your own ingenuity and insight to what needs to be done.

One of the things that, whenever we look at an issue where there has been a gap in performance, recognizing that is always an important first step—and I appreciate that each of you have said that it is the Air Force's responsibility and your interest in fixing it—but we know that the Air Force is part of overall DOD. And the things that were occurring in the Air Force could not have occurred in the Air Force without also a lack of focus also from the Department of Defense.

In order for you to fix it, you need that overall support from DOD. And I know you have a number of accomplishments that you put on the board of changes that you have made and you have given us the answer that the Air Force is committed. But what I want to ask you, the question is, are you getting the support from DOD that you need? Is it recognized that this is an important task within the Air Force and needs to be honored as such, just as you then try to honor those who are working within the Air Force in this area. It needs to have that level of recognition in DOD. Do you feel you are getting that support?

We will start with you, General.

General ALSTON. Congressman Turner, I have a good component of my day or my week engaged in the interagency process, principally inside the Department of Defense, interfacing with the Nuclear Weapons Council and the subordinate organizations that feed the Nuclear Weapons Council. I have a continual relationship with the Defense Threat Reduction Agency [DTRA], which is a very important partner in supporting our efforts, as well as the department wide.

We also have a regular communication with the Department of Energy [DOE] and the National Nuclear Security Administration [NNSA] principally.

The Air Force, about 2 years ago, it was the spring of 2008, we had left a job vacant at the National Nuclear Security Administration. We had not competed a flag officer to fulfill the job there.

The Air Force recognized that this, too, could contribute to our improved performance, and we decisively put a general officer into that job, and we have continuously manned that position since.

So I am in a pretty good position to give you a feel for how those relationships are going. The Department of Defense provided a great deal of oversight, as the Air Force was beginning to be informed by what is now totaling about 13 different internal and external reviews, and so AT&L [Acquisition, Technology and Logistics] was the principal interface with the Air Force. They also are the architecture to support the Nuclear Weapons Council, so it makes sense that that is where the interface would be.

But we had good recognition of the work that we were doing. We were given the kind of breathing room that I think we needed in order to march out decisively as we did. So, as much as I was doing my best to keep them informed, they did not interfere and, in fact, were supportive of the efforts that we had brought under way.

They helped craft definitions for something new called nuclear weapons-related material. In the aftermath of the challenge that we had with the misshipment of those sensitive missile parts, there was a whole category of materiel that really needed to be defined with some degree of precision for us to do, to get our arms around it and to put into place the tracking mechanisms that are required to do that job. So it has been a partnership when it came to those things as well.

The Defense Threat Reduction Agency, we have been very transparent. We have demanded transparency, and we depend on objectivity. DTRA has been very supportive of our inspection process. They have equities in our performance as well. The Combatant Commander, STRATCOM [United States Strategic Command], General Chilton, has equities. He has been having his folks monitor and accompany inspection teams.

And I think that all of these things in aggregate do show a partnership that is helping us understand. There has been discovery that has gone on for us to fully understand the weaknesses that we had and the strengths so that we can propagate those as broadly as we need to across the enterprise in an accelerated fashion to adopt new and good ideas.

So I would say in every dimension that this is certainly not a uniquely Air Force issue, the atrophy in focus on the nuclear enterprise. Dr. Schlesinger made that clear in both his first volume, and particularly in his second volume. But for the Air Force interfaces with those agencies that we need to partner on, I think that we have developed very robust relationships.

And I would also include the United States Navy. I have benefited a great deal from my counterparts in the Navy. The Chief of Staff and the Chief of Naval Operations have, over the last—as General Schwartz and Admiral Roughead have worked together. This partnership is also bearing fruit that benefits both of our services.

So I think there has been more outreach than an internal effort. We opened our arms, and we are very transparent in our efforts, and folks pitched in to help us every step along the way.

Mr. TURNER. General Klotz, would you like to add something?

General KLOTZ. If I could add to that very comprehensive and thorough answer from General Alston, just let me just say in my mind there is no doubt that there is very strong, committed support from the level of the Secretary of Defense, Secretary of Defense Gates, both in his public statements, in his testimony before this and other committees, in his visit to Minot Air Force Base about a year ago where he addressed both the members of the bomb wing and the missile wing to stress the importance of their duties and responsibilities with respect to nuclear weapons, that we have very strong leadership from the top down through the Department of Defense to the Air Force.

Like General Alston, I regularly interact with various offices within the Office of Secretary of Defense and with the Defense Threat Reduction Agency. They have been out to visit us at Barksdale Air Force Base, and I think the lines of communication are open and the support is both strong and palpable.

The Air Force, too, senior leadership, has shown extraordinary interest and leadership in this particular field. The Secretary of the Air Force, Mike Donley, and our Chief of Staff, General Schwartz, have made this one of our top priorities within the Air Force.

To give you an example of how they have walked the talk is, over the Christmas holidays, when they could have been just about anywhere else, our Chief of Staff, General Schwartz, was in Francis E. Warren Air Force Base, one of our missile bases. And the Chief Master Sergeant of the Air Force, Chief Roy, was at Minot Air Force Base visiting the bomb wing and the missile wing there. I will add that both of them almost got snowed in by blizzards when they were up there, but it made a tremendous signal of support from the leadership to those airmen who serve in both the bomb wings and the missile wings.

It is important for people—if your boss takes your work seriously, then the individuals will take their work seriously. And our leadership in the Department of Defense and in the Air Force have made that known and sent a very strong signal of how important they think this particular mission is.

Mr. TURNER. General Thomas, our chairman asked the question of, do you know where all the nuclear weapons are? And you answered, “The short answer is, yes.” I am not going to challenge you on that answer, other than to perhaps add to it to say that the answer needs to include also, “but we could do better.”

When we were talking yesterday, the three different categories that you were looking at, of the improvement of core structure, chain of command, personnel, how do you enhance the personnel, their capabilities, and then the other side is infrastructure and, as the chairman referenced, the issue of technology.

As you know, having no record that a weapon has been moved doesn't necessarily mean that it is where it is supposed to be. And I know you make an effort to make certain that things are where they are supposed to be. But, nonetheless, technology is an issue that both provides you a problem with the security that you have to be putting forward and also provides an opportunity to help lessen the risk.

So I do hope that as you look to your to-do list it continues to include the need for “we can do better.” For although I know the

answer is yes, I know that there is still an opportunity to know more, and more accurately, where all of our items and nuclear weapons might be.

Shifting then to—having said that, shifting then to the issue of culture: one of the criticisms had been that the people who were performing these duties may not have valued it, or received the support illustrating its value. I would like you to speak about that for a moment.

The importance, obviously, of you have no margin of error. The security to our country, the weapons, represent a risk to us. Also, the importance of our nuclear deterrent and what it means for the overall national security.

But culture remains an issue. Especially, you have the administration talking about the issue of wanting to eliminate nuclear weapons from the face of the Earth.

We have to still be able to instill in the people that are doing it the importance that they are actually keeping our country very safe.

Could you speak to that for a moment?

General THOMAS. Yes, sir, Congressman Turner.

First, thank you, we can do better. I will make sure that I start to say that more often. We can do better with the ability to track all of our nuclear weapons-related material.

Regarding the culture, I am the product of about 30 years of being in the Air Force and being in the nuclear enterprise business. And during those 30 years I have seen that we have withdrawn weapons from active duty. And in that steadfast time what I have always had, as General Klotz so brilliantly stated, is the senior level of leadership awareness.

While we have documented that there has been almost a decade and a half of us not communicating the importance, the culture started to wane and the question of the youngest airmen was, if there is no leadership involved, then why am I doing that?

We have started to turn the corner on that by not only getting the resources—resources meaning funding and personnel; our Secretary and our Chief have been very support active in giving us the things that we need—but, also, starting to take care of the issues that we have neglected over that decade and a half. For instance, nuclear support equipment. It is critical to have it operational in order for us to give our warfighter an operational weapon.

We bought nuclear support equipment in 1965. We made some attempts in the early 1990s to upgrade that, but we failed because of the nuclear certification requirement. Today, the youngest airman out there knows, as a point of fact, because our senior leadership has been there to tell them, our senior leadership has added more personnel to their unit, and our senior leadership has provided the money to get newer support equipment, or at least in the interim, while we do the acquisition process correctly, to fund the broken items on those assets.

So the culture starts with the senior leadership on the ground, where the youngest airman is, explaining the importance of the mission, applying the resources necessary, so we can overcome what I determined last year was potentially a culture of resignation at the youngest person's level, because they didn't see the sen-

ior leadership out talking about it. They didn't see more personnel coming for the mission. They didn't see funding to upgrade this warhead equipment by bringing in the newest technology, as you both acknowledged. So that is where we begin the foundation of restoring a culture of excellence, a culture of preciseness, a culture of "we are going to be in this mission for a long time." So, Congressman Turner, that is the beginning of it.

But from the information technology and other technologies, as part of our nuclear roadmap, those are the things that we are integrating. As General Alston said, we started the first nuclear roadmap with the ICBM delivery system that we have undergone since about 2001. As a part of that, you have to do the entire systems assistance.

Do we have the people to operate it? Do we have the training that goes along with that before that person intends to operate it? Do we have the tech data that goes along before the person goes through the training?

So all of those are part and parcel to us changing the culture.

Mr. TURNER. Thank you, General. Thank you, Mr. Chairman.

Mr. LANGEVIN. I thank the ranking member.

With that, Mr. Lamborn is recognized for 5 minutes.

Mr. LAMBORN. Thank you, Mr. Chairman. Thank you for having this hearing and thank you all for your service and for your being here today.

I find your testimony reassuring that we are taking this vital mission and making it even better, making it even more excellent. So thank you for all that.

My question is closely related to your testimony and has to do with the warheads themselves. I am concerned about two things. One is the warheads are made of an inherently unstable material—radioactive materials—and they are going to degenerate over time. Now, we all know that.

Secondly, I know that today we have more capability of building in security features that would make—should, God forbid, anyone unauthorized or a terrorist or whoever get their hands on one of our weapons, they would be—it would be impossible for them to detonate it with the kind of security features that we are capable of implementing today.

Are we doing enough to make sure that these—monitoring of the radioactive portion of the warheads and the security features are being either retrofitted or added into, as we go? I mean, I know it is a little different than your testimony today, but that is a concern that I have. And I just want to make sure that we are doing everything that we can to make progress in these important areas.

General ALSTON. I would like to probably turn this over to General Thomas in a minute, because he is the nuclear weapons wizard at the table.

But I would first comment, though, that General Chilton and other senior national leaders are on record on how important it is for us to provide attention to the national stockpile. The Air Force, the credibility of our deterrent systems depends on all of the parts of those systems and the weapons being a principal part of that system.

We do have challenges. Our partnership with the Department of Energy, this is not exclusively a resourcing issue for the NNSA and the Department of Energy. The Air Force has significant amounts of investments that are also required in partnership with DOE, depending on whose responsibility it is for the weapon. But we do have challenges in the Department of Energy infrastructure. The stockpile is aging, and I think that is pretty well documented that attention needs to go into that.

But, at the end of the day, it is the credibility of these systems that would be at stake, despite the great Stockpile Stewardship Program that has done such a magnificent job to date to help us calibrate just how safe, secure, and reliable that stockpile is.

General Klotz.

General KLOTZ. Congressman Lamborn, thank you for letting General Thomas give the expert answer.

From the operator's point of view, I accept the premise of your question, which is that these weapons are inanimate objects, yet made up of many different components that age with the passage of time.

I think we have, through the Department of Energy, working with General Thomas and the Nuclear Weapons Center, good, solid plans and programs for making sure that the systems are sustained over time through a series of life extension programs, but there are challenges.

As General Alston pointed out, there are challenges to the Department of Energy in terms of an aging infrastructure. Many of the facilities which they operate out of were built during the Manhattan Project in the Second World War, and those are the same facilities that they have now in various states of repair. They find it difficult, under those kinds of circumstances, to recruit the best and brightest graduating from engineering and science schools across the country.

So there is much attention, I think, that needs to be paid to our principal provider, the Department of Energy, in terms of being able to continue to sustain these weapons for as long as they are part of the operational inventory or part of the reserve inventory.

The other point, though, is, as we conduct these life extension programs, there is the opportunity to, without changing the military capability—in other words, not creating a new military capability—to design in and to put in additional safety and security features into the existing weapons. And as an operational commander that has responsibility for those as they are deployed out in the field, I would hope as a Nation, as a Department of Defense, as a Department of Energy, would be given the permission and have the opportunity to trade space, as it were, to take advantage of those opportunities as we go through life extension programs to design in those types of features.

General THOMAS. It is my privilege to answer that question for you.

In my oral, I talked about my partnerships. I am pleased to report to the committee that I am in partnership with George Miller up at Lawrence Livermore National Laboratory, Tom Hunter up at Sandia National Laboratory, and Michael Anastasio at the Los Alamos National Lab. We are in frequent contact on the subject of the

state of health of all nuclear weapons. Through DOE's continued surveillance, I am repeatedly and frequently updated on the status of every weapon in the Air Force inventory.

You are right. We can do better. We can upgrade from the early 1950s, 1960s, 1970s technologies, security systems and surety that we put into every weapon. In working with these three labs and working with now a Chief and a Secretary, a warfighter, and the headquarters of Air Force, understanding that we can do better, I think you will start to see us articulate more of rendering safety features where a weapon that can render itself useless as a weapon as we move down to protect us from the threat of terrorism, someone actually captures one of our weapons. So I am pleased to report that we are involved in those on a frequent basis.

Mr. LANGEVIN. Mr. Lamborn, thank you. Mr. Fleming is now recognized.

Dr. FLEMING. Thank you, Mr. Chairman, and thank you, gentlemen. It is always great to see you again. Barksdale Air Force Base being in my district, it is of vital importance to hear your testimony today.

Just one comment before I get to my first question. General Alston, paraphrasing you, you said that the airmen didn't fail the system; the system failed the airmen, and I entirely agree with that.

I come from a medical background, obviously, and dealing with hospital issues and mistakes, the unthinkable things such as amputating the wrong leg, we have to deal with these issues.

We use things like total quality management concepts that involve redundancy, accountability, the use of technology and certain leadership, and reading about this failure, the unauthorized transmission or the unauthorized transfer of nuclear weapons to Barksdale from Minot, and reading that summary, it is very interesting that, even though it was a very redundant system, it appeared that over time people had begun to ignore the checking of various statuses, that finally it wasn't until it reached Barksdale that somebody actually performed on their job and discovered the weapon. So the system worked in a way, but, obviously, we would much rather catch problems much earlier. But I think a refocus on that is certainly the right thing to do, and I appreciate the fact that we are doing that.

I would like to focus on the weapons storage area [WSA] at Barksdale. You know, we have worked on this in the past months. We even have appropriated \$77 million for the project.

I want to pull a quote out regarding this discussion in the Schlesinger report and others, and it is the following: The closure of the weapons storage area at Barksdale was a—because we did have one in the past, you know, back from the SAC [Strategic Air Command] days. The closure of the weapons storage area at Barksdale was a significant mistake with a negative operational impact. It created a requirement for bombers to train and exercise far from their home station, resulting in operational complications. Nuclear munitions training and proficiency were severely impacted, owing to the inability of training weapons to simulate the real thing. Only from a global nuclear deterrence perspective do the ramifications of this become clear.

The Task Force strongly encourages the Air Force to revisit the WSA closure decision. That is to say that should we reopen the nuclear weapons storage area at Barksdale—and I think the decision was made to do so. We have appropriated the money, but I would like to hear kind of what the status is on that and are we going to follow through with that?

General ALSTON. Yes, sir. You recount where we are very well. We recognize and fully understand Dr. Schlesinger's position on the closure of the Barksdale weapons storage area and, therefore, Air Force leadership made the decision to begin taking action to recertify the weapons storage area at Barksdale. And throughout the course of last spring and last summer and through the fall, we went through all of the appropriate steps that are required for us to begin that process, to include a site activation task force that went to Barksdale to survey the weapons storage area. We brought Sandia in because Sandia Labs has responsibility to validate what the security requirements would be in order to do that.

Initially, I think we had a rough order of magnitude early figure of about \$150 million that would be required to reopen the Barksdale weapons storage area. But we continued that process, and that has culminated at this point—just I think within the last few weeks, at Air Combat Command—that phase has culminated with their producing an end-to-end programming plan which is another part of the process.

The proximity of the conclusion of this phase in our assessment of the weapons storage area and the next steps that have to be taken is now in proximity to the Nuclear Posture Review being published, and we are going to, now that we have got the plan in hand, we are going to be informed by the Nuclear Posture Review before we begin taking any additional actions with regard to the Barksdale weapons storage area. So that is the current state of play with that project.

Dr. FLEMING. All right, thank you.

I have another question, and this is really a little unrelated to this, but I think I couldn't have a better panel in front of me to ask this question. And this relates to a discussion that we had in a hearing last week with Admiral Willard where we are seeing some vulnerability by our—and don't get nervous about this; I realize you are not Navy, okay? But it does impact the Air Force.

But the aircraft carriers, there is some vulnerability from medium-range missiles from China, and our ability to project force around the world is impacted by that, and that opens the discussion again about the Next-Generation Bomber. That had been sort of set aside in a budgetary way over the last year or so, and I know that there are discussions to open that back up. It seems to me, since we don't have an immediate antidote for this problem, this vulnerability we have to our aircraft carriers, that we need to refocus on the Next-Generation Bombers. So I would like to ask the panel's view and perspective on that.

General ALSTON. Sir, I can tell you, as you know, the Secretary of Defense back in April of last year directed the Air Force to take another look at that program to revalidate the requirements, to understand the technology better, and to relook at that and get back to him. That process has been part of the Quadrennial Defense Re-

view. There has been a lot of work done on that in the Air Force and in partnership with the Department in order to validate those requirements and fulfill the requirements set out by the Secretary of Defense last April.

So we have current penetrating platform capability in the B-2 and we have standoff capability with the B-52. At some point, the B-2 will not be as effective in emerging threat environments in the future. We do think that it is important to have that kind of capability and, therefore, as we make our risk calculus, that has to be all part of the equation. Now, I don't know how debatable it is when the B-2 falls into that category of less capable as a penetrating platform, but I believe it is into the next decade that we would have that capacity.

So I think we recognize the threat as you articulate the threat and the challenges ahead of us, and I think that that will be spoken to in the Quadrennial Defense Review and the upcoming budget cycle.

Dr. FLEMING. Okay. Anyone else?

General KLOTZ. I would like to add to that. I think General Alston has it right. There will be a lot of discussion on this after 1 February when the Quadrennial Defense Review gets delivered and key senior leaders from the Department of Defense and the Department of the Air Force come over here for the posture hearings. I think this will be an item that will be directly addressed by that.

Let me just say something about our current bomber force, though. Our sense at Air Force Global Strike Command is that these weapons systems continue to make a major contribution to both the strategic nuclear deterrence as well as conventional operations.

B-52 provides that standoff capability with the Air-Launched Cruise Missile that General Alston mentioned and, of course, the B-2 has the ability to penetrate more heavily defended targets. So synergistically, they contribute capabilities, both of which we think are important.

They also play a major conventional role which should never be overlooked. They played a key role during Operations Enduring Freedom and Operations Iraqi Freedom in the early stages of the war; the B-2 with that ability to penetrate through heavily defended airspace, and the B-52 with its ability to carry large amounts of armaments, and with the developments in munitions to drop those armaments from 35,000 feet to within meters of their targets, which was an awesome, and, I think in particular engagements, a decisive capability.

So I am fairly optimistic about the contribution that both of those platforms will continue to play for many, many years to come as an integral part of any air campaign planning that is done by a combatant commander.

We need to continue to sustain and upgrade both the B-52 and B-2 to make sure that, for instance, we can take advantage of new communication technologies. Later this year, the Air Force will launch the Advanced Extremely High Frequency Satellite and we will need to make sure that both the B-2 and the B-52 can make full use of that new communications mode. There are advances in radar technology which have been introduced into other aircraft,

which I would submit would make a major contribution to the capabilities of both of those platforms.

But without getting into any operational planning details, which we are enjoined from doing, they continue to have and continue to make, can make, an important contribution to combatant commanders as they do air campaign planning.

Dr. FLEMING. Thank you, General.

Thank you, Mr. Chairman.

Mr. LANGEVIN. Mr. Owens is now recognized for 5 minutes.

Mr. OWENS. Thank you. I am sorry I was a bit late getting here.

Having visited a few WSAs in my time in the Air Force, I do have a visual in my head. It appears to me from the reading that I did, that this was a human error scenario in both of these cases. I think the conclusions that were reached by the investigating officers were that the procedures were in place and that it was, again, human error that caused these problems.

The question that I really have is what have the steps been, or what steps have been taken to ensure that this doesn't occur again? I do recall reading about the story in North Dakota, and obviously you took some rapid steps relative to the commander out there. But what is the process that you went through to ensure that we have the safety of the weapons in hand?

General ALSTON. Well, sir, of course, immediately in the aftermath, there was a comprehensive assessment of the quality of the training, the inspection process and the quality of the inspection processes that we had. There was a very thorough treatment of the current procedures that were in place and there were revisions to those procedures.

The nuclear business is a system of checks and rechecks and balances, but over all of that needs to be a culture that is self-critical and that the safeguards that are in place are, in fact, effective.

So on the ground at Minot on how a maintenance team and a munitions team would go and open and enter a weapons storage area and identify the weapon that needs to move, pull it out, bring it to the flight line and load it up on a B-52, there is fantastic scrutiny on how to perform that procedure. Early on, I am sure there were wing commanders that were validating whether or not every step was being performed. But there has been great leadership intervention in order to ensure that.

We have to depend on our processes, but our people at the end of the day are what are going to sustain us, and our culture is going to be the kind of—the atmospherics and the environment under which these folks are going to perform.

The people are the long pole in our tent right now in terms of having that self-sustaining culture and the proficiency levels we need. Our bench strength isn't what we used to be. Our depth isn't what it used to be. We made personnel decisions in the early nineties that have created an enlisted bathtub in the 15- to 17-year range for all of our AFSCs [Air Force Specialty Codes], and we have done close scrutiny of all of our nuclear-related Air Force Specialty Codes. So, consequently, in the field today, if you do not have the tech sergeant at the 15-year point of experience that you otherwise would depend on, you are going to cover that with a junior person or a senior person, and neither one of those is optimized.

So we have begun work at the direction of the Secretary, and you can trace this into Admiral Child's Defense Science Board report on the erosion of nuclear deterrent skills, that we have a comprehensive human capital strategy that is in its early stages to make sure that we are going to deliver the right people in the right place at the right time.

But, really, leadership focus was a missing ingredient under the conditions that we were operating before. The leadership focus from the Chief and the Secretary has been consistently—I mean, it is echoed from the top to the bottom on a daily basis. But we do need to strengthen that, and that is going to take us more time in order to make sure. Our force structure is not so large anymore. We need to make sure that we deliberately deliver that kind of capability and that proficiency, every man and woman just making sure they are absolutely prepared to succeed.

Mr. OWENS. Just a follow-up question. In reading the materials that were provided, you have a series of, in some cases, multiple checks that were missed in these particular instances. Do you have an audit process that allows you to see up the chain of command if, for instance, one or more checks were missed, so that you can evaluate whether or not what you are doing now is taking hold?

General ALSTON. The inspection process that is underway in the field today audits—when did you open the door, when did you close the door, how long should that procedure take? If you have to go in and you have to check every configuration in there, should that be a 5-minute procedure or should that be a 45-minute procedure? So you get to audit that.

We used to do samples. We still do sampling, but we do much larger sampling, and in some cases we do 100 percent audits of the paper trail that supports the procedures that we have put in place.

So we have gone through a centralized training program for every one of our inspectors. They are certified by their major commands. This is new. We had not done this with our nuclear surety inspections prior to this time. So, common training, MAJCOM certification, a 100 percent oversight of all of our inspections.

We provide additional oversight. So a major command goes out to inspect his operation and the Air Force inspection agency is part of that process for a full nuclear surety inspection. DTRA accompanies us on many inspections. STRATCOM accompanies us. So there is an awful lot of oversight and inspection prowess that is currently in evidence in the field today.

But I think that we are depending on daily performance and the audits associated with inspection to ensure that we are, in fact, following through with the procedures and the processes that we have put in place.

Mr. OWENS. Thank you.

General KLOTZ. Mr. Chairman, may I add to that? There are a lot of changes from when I first started walking around WSAs as well, sir, quite apart from the security which is very, very different from the technology which we use in the WSAs.

But there is another significant change that we should point out—and General Thomas would be the actual one to talk to the details of that. One of the changes we made post-Minot incident was to take all of our WSAs and place them not under the local

wing commander's authority, but under the authority of the Air Force Nuclear Weapons Center at Kirtland Air Force Base.

We talked earlier about how we draw good ideas from the Navy and vice versa. I think that is one of the good ideas we took from the Navy in the sense that they had had centralized managed control of their equivalents of weapon storage areas through a single contractor. So to a certain extent, we bought into that same notion, only that the contractor here in this case is actually the Air Force Nuclear Weapons Center that does that.

What that was intended to do was to ensure that we had standardization of procedures and processes and checklists within the weapons storage area, so that whether it was a bomb wing weapons storage area or a missile wing storage area or one of the weapon storage areas that belongs to General Thomas at the Nuclear Weapons Center, that you would see the same procedures, the same checklists, the same inventories and so on.

Now, we are relatively new into this and we will be very closely looking at how well they do. There was just a nuclear surety inspection at Francis E. Warren Air Force Base in Wyoming in which the Inspector General from the Air Force Materiel Command was in looking at the WSA, and they passed that inspection. So that is another change, in addition to those that General Alston has mentioned, to deal with issues inside the weapons storage area.

Mr. OWENS. Thank you.

General THOMAS. Thank you, sir, for the question, and I would like to follow up a little bit. General Klotz and General Alston have done a great job explaining. But one of the things, with the Secretary and the Chief and General Hoffman's approval, the first thing we did was, as General Klotz said, you looked at the standardization at every weapons storage area to make sure it was correct. I am fairly certain in a day-to-day oversight that we are not there yet, but we are getting there rapidly.

The second thing we did was upgrade the leadership at each one. Previously, we had a young captain that was a flight commander that was responsible for the inner workings inside of the weapons storage areas as it had to do with weapons. So we moved that to a lieutenant colonel's position, who brings in a little bit more experience.

The second thing we did was go back and look at the training that each person working inside the WSA had, local training. We have standardized the lesson plans and standardized everything. But we also went back to Sheppard Air Force Base to see what they were being taught. We found there was a deficiency there.

Over the years we stopped the training that was there when we were young lieutenants that were going to go into the maintenance business. So we reinstated that, robusted that up. At the Nuclear Weapons Center, we now look into that training because those trained personnel will go to those weapon storage areas.

We partnered with the Defense Threat Reduction Agency and increased computer-based training at Sheppard Air Force Base and the ability to deploy that computer-based training out to our weapons storage areas.

Additionally to that, we did an assessment. We will be moving, as others have alluded, to get better technology for portal moni-

toring at the gate. Something passes with a radiation signature, we will know; and we will then be able to compare whether it should be moving.

On a daily basis, we have experts at the Air Force Nuclear Weapons Center that go into the defense integration and automated management of nuclear data services to see exactly what maintenance was done on each weapon and whether that was the right type of maintenance and whether we fulfilled all of the squares of the paperwork that was required.

The other thing that our Chief of Staff, after visiting Barksdale, encouraged us to do was get an automated process for the 504 procedure, which is actually where you transfer weapons, where we can go back in and do that robust auditing of exactly where did it transfer, at what point, who transferred it, to include the maintenance of it.

So we made leaps and bounds on that. But it started with getting the right senior people in with the right training. So our Chief and our Secretary has just helped us tremendously in making sure that we do this correctly.

Mr. OWENS. Thank you. I yield back.

Mr. LANGEVIN. Thank you.

Just a final question, switching gears for a second if I could. General Klotz, how will you coordinate with Air Combat Command to sustain the readiness of the B-52 and B-2 fleet? With all nuclear-capable bombers now under Global Strike Command, how are you managing the competing demands placed on the bomber fleet to support conventional missions and training requirements?

General KLOTZ. Thank you, Mr. Chairman, that is an excellent question and, in fact, one of the principal issues that we have been working very closely on with Air Combat Command. In fact, as we work through this mission transfer process, we have been holding weekly meetings at the working group level and then every other week at the two-star level, video-teleconference. And just last week General Fraser, who is the commander of Air Combat Command, came to Barksdale Air Force Base and we did a final readiness review to make sure we were ready to make this transfer.

I hasten to add that after the transfer is made, that does not mean that we never talk to Air Combat Command or Air Combat Command never talks to Air Force Global Strike Command. We are still going to be working very closely together as Global Strike Command achieves its full operational capability later this summer.

But even beyond that, Air Combat Command plays a unique role within the Air Force. It is the lead for what we call the Combat Air Forces, the CAF. As such, they are the lead major command not just for developing tactics and exercises and deploying forces for Air Combat Command, but for the other commands that operate strike aircraft, such as the Pacific Air Forces and U.S. Air Forces in Europe, and now Global Strike Command. Air Force Space Command is also an important part of that process.

So they will continue under memoranda of agreement and memoranda of understanding and under a program plan that the Chief of Staff signed to be the lead on scheduling exercises, such as at Red Flag, and integrating forces, including Global Strike Command

bombers, into those types of exercises; and in serving as the principal interface between the Air Force and Joint Forces Command, which has responsibility for presenting all forces based in the Continental United States to overseas regional commanders.

We also have people at Air Combat Command headquarters, will have and continue to have people there, Combat Command headquarters, under a detachment there, who wear an Air Force Global Strike Command patch on their uniform but actually sit at desks alongside their counterparts at Air Combat Command to make sure in the key areas that we are lashed up together.

We will participate, as I said, in exercises like Red Flag and the other flag series of exercises. There is a process known as weapons and tactical conferences, WEPTAC, which we hold. In fact, I was just out at Nellis Air Force Base last week with General Fraser of Air Combat Command and General Kehler of Air Force Space Command, where members of our three respective commands were working down to the level of actual operational tactics and integrating forces across the entire range of capabilities that the Air Force can bring to bear.

So we will be working very, very, closely with them in terms of organizing, training and equipping the bomber force for, as I said before, its awesome and in some cases potentially decisive capabilities that it brings to the fight and one that is valued highly by regional combatant commanders across the globe.

Mr. LANGEVIN. How well do all the airmen in both Global Strike and Air Combat Command understand the rationale for the division of bomber platforms within each major command? Are there any conflicting command and control issues that you discovered or other issues that have created any adverse effects in successful mission execution?

General KLOTZ. Again, an excellent question. And to put this in context, the Air Force made a conscious decision to leave the B-1B bomber out of Global Strike Command. I think the simplest reason for that is the B-1B has been re-rolled as a conventional-only bomber. That is a position that we have taken within the Air Force in terms of sustainment modernization. It is also a position we have taken internationally, particularly in our discussions with the Russians as part of the START [Strategic Arms Reduction Treaty] and Moscow Treaty consultations that have continued since those treaties went into effect.

Now, having said that, you know, the B-1 and the B-2 and the B-52 are bombers, multi-engine, large aircraft, and there are skill sets that are applicable to all three bombers. In fact on my staff, both at the senior level and at the action officer level, there are pilots and navigators and electronic warfare officers who have flown in two or more of those weapon platforms.

So I would see, and in my discussions with General Fraser, we agree on this point, that there will continue to be a cross-flow between platforms. In other words, you might fly the B-52 for a tour and then transition into the B-1, or vice-versa.

Additionally, another thing General Fraser and I agreed on: we are going to bring back competition, annual or biannual competition, as a means of promoting excellence and esprit and pride in what we do. And as part of that combination, we intend to invite

the B-1s, even though they are not part of Air Force Global Strike Command, to participate and compete in those competitions.

Mr. LANGEVIN. Very good. I will have some further questions for the record.

With that, let me turn to the Ranking Member for any other questions.

Mr. Owens.

Mr. OWENS. I have no questions.

Mr. LANGEVIN. Mr. Fleming.

Dr. FLEMING. I would like to ask one.

General Alston, just a follow-up to my question about the weapons storage area in Barksdale and the Quadrennial Review, and I understand all that. What would be the scenario where we wouldn't move forward with reestablishing the nuclear weapons storage area at Barksdale?

General ALSTON. Sir, our way forward is, as we are informed by the Nuclear Posture Review—and we have a new major command commander taking responsibility for the bomber mission, and we have reached this point in the process where we have to reengage senior Air Force leadership—I think that we are going to benefit from that collaboration to make sure that we are doing the right thing for the nuclear mission. So, I think the Secretary and the Chief would expect nothing less than for us to bring together all of the required players to ensure that they are able to make the very best decision and pace the project and otherwise make sure we are doing the right thing for the nuclear mission.

Dr. FLEMING. Okay. Thank you, sir.

Mr. LANGEVIN. Just under the wire, Mr. Heinrich is recognized for 5 minutes.

Mr. HEINRICH. Thank you, Mr. Chairman. I apologize. I was on the floor. I have got a couple questions, actually.

Mr. LANGEVIN. I don't think your microphone is pushed on.

Mr. HEINRICH. I apologize. First, just let me congratulate you on the initial operations capability of the Air Force's Nuclear Weapons Center Sustainment and Integration Center back in November. Thinking long term, I wanted to ask, if fully funded, when would you foresee the final operations capability being achieved and how will that benefit the overall Air Force nuclear weapons enterprise?

General THOMAS. Thank you, Congressman Heinrich. Fully funding is certainly a part of the equation to become full operational capability. But another part is sufficient manning, which we have gotten the resources now and we are hiring. By 1 February we think we should have hired all shifts to go there. The second portion would be facility, as you have traveled to see.

Our MAJCOM commander, General Hoffman, has made a facility for the Sustainment and Integration Center his number one MILCON to the tune of about \$49 million. But the other part goes, I think, to what the other members of the committee have asked about. It is the information technology and our ability to wed that into that facility that gives us instant visibility, 24/7, 365. Once we move forward continually in what we call our phasing of information technology with regard to positive inventory control, we will be able to say 100 percent or fully operational capability. That will be the only piece that will hold us.

But, you know, in the Air Force, we don't wait for 100 percent. Once we get to about 75 or 80 percent, where we have visibility through tracking and the other mechanisms being able to have a partnership with Air Force Global Logistics Support Center, we will declare full operational capability. We are going to declare that before we get the new facility, because at Kirtland Air Force Base, among the 100 or so mission partners, we have had mission partners move out of space to give us space. So we will declare that, but will still start working toward a facility through MILCON.

Mr. HEINRICH. Thank you, General.

In September of 2008, I think it was, the Secretary of Defense's Task Force on DOD Nuclear Weapons Management outlined the need to establish the Nuclear Weapons Management Fundamentals Course at the Nuclear Weapons Center. According to your written testimony, or your submitted testimony, one of the most significant challenges that lies ahead—and you have raised this directly with me—is your most important asset, your people, and rebuilding that asset.

What is the status of the aforementioned course and how has it better prepared your airmen for certification and command?

General THOMAS. Thank you again, Congressman Heinrich. The status, it is full operational capability. We have run about 13 courses, to the tune of about 300 people that were going through. Upon initially establishing that, our biggest customer at the time was General Kehler out of Air Force Space Command who thought he needed rapidly to get some of his commanders, newly in command, through the course so we could talk about it.

When we did that, we recognized that we couldn't send everybody through basic training again, nor could we wait until they went through professional military education. So we established this week-long course where we hit upon everything from why we have the weapons, why we exist as the United States Air Force, to the challenges, the priorities, to better inculcate the culture of nuclear fundamentals for strategic deterrence. But I think we have kind of hit that really hard and the 299 or so that have gone through have critiqued us very hard, and with each course it gets better.

Mr. HEINRICH. Great. The last question. You mentioned mission partners a few minutes ago, and I want to broaden that a little bit and just ask you about the level of collaboration with Sandia and the other national labs, our universities, *et cetera*, even Guard and Reserve components, to support the mission that you do.

General THOMAS. Thank you again, Congressman. Our partnerships, as you well articulated there, include Lawrence Livermore National Lab, Sandia National Lab and Los Alamos National Lab. In our frequent conversations with each lab, they recognize that they could contribute more if they assigned personnel to the Air Force Nuclear Weapons Center. I am proud to report that each lab has, on their own, provided a weapons expert inside our facility and my commander's headquarters, a weapons expert for each of the labs.

Second, the University of New Mexico, which we are pleased to be aligned with, has come on very hard in helping us with stay-in-school students, particularly those in graduate school, that we

kind of get to take their transcripts and their resumes to see what talent they could bring to us. So the University of New Mexico, New Mexico State University, New Mexico Tech, all have come to us and are providing us students so we can continue to grow the talent that we are going to need. And that talent, as you know, may not stay with the Air Force but it may go to any of the national labs or to industry that is into this business.

The third thing we have done is we have gone out to industry right there in Albuquerque. As you know, we have some very technologically-inclined industry there, and they are starting to support us too; some through existing contracts, but most know that the contracts now are going into insourcing and to hire them as government. But they have come to us with some of their employees that they may potentially lay off and say, 'Hey, this is a good candidate.' So that effort is working with us very well.

Mentioning our partners there at Kirtland Air Force Base, the Air Force Research Laboratory is integrated into everything we are doing in trying to get us the newest technology—so much so that their chief executive officer for technology has been on loan to us. The Air Force Operational Test Evaluation Center, led by Major General Sargeant, is involved with helping us with our center test authority, and Defense Threat Reduction Agency is involved with helping us with our nuclear fundamentals course. The Air Force Inspection Agency lends people to us when we talk about inspecting to a higher standard, consistency of standards. So it has just been a total partnership at Kirtland Air Force Base and throughout the Air Force.

Mr. HEINRICH. Thank you. I yield back.

Mr. LANGEVIN. I thank the gentleman.

With that, let me conclude by thanking our witnesses for their testimony today. We take very seriously on this committee the issue of securing our nuclear enterprise. I know that you share that commitment. I appreciate your testimony and the progress that has been made. We will continue to exercise robust oversight over this issue and look forward to working with you in your various roles.

With that, I want to thank you all for your service to our country and all you do to keep America strong and keep us safe.

I want to thank the members for their attendance today. Members will have a week to submit additional questions for the record, and I would ask our witnesses to respond expeditiously in writing.

With that, given this was our first hearing of the Strategic Forces Subcommittee under my chairmanship, I would be remiss if I didn't publicly acknowledge and thank the great work of my predecessor, Congresswoman Ellen Tauscher, now Under Secretary for Arms Control and International Security, and appreciate the great work she did in leading this subcommittee and her continued service to our Nation.

With that, this hearing stands adjourned.

[Whereupon, at 11:40 a.m., the subcommittee was adjourned.]

A P P E N D I X

JANUARY 21, 2010

PREPARED STATEMENTS SUBMITTED FOR THE RECORD

JANUARY 21, 2010

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STRATEGIC FORCES SUBCOMMITTEE
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DEPARTMENT OF THE AIR FORCE

PRESENTATION TO THE HOUSE ARMED SERVICES COMMITTEE
STRATEGIC FORCES SUBCOMMITTEE
UNITED STATES HOUSE OF REPRESENTATIVES

SUBJECT: Status of the Air Force Nuclear Security Roadmap

STATEMENT OF: Major General C. Donald Alston
Assistant Chief of Staff
Strategic Deterrence and Nuclear Integration

January 21, 2010

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HOUSE ARMED SERVICES COMMITTEE
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Chairman Langevin, Ranking Member Turner, distinguished Members of the Committee, thank you for the opportunity to discuss Air Force strategic programs. The key ingredient to ensuring success of these programs is commitment—commitment to strategic deterrence, commitment to maintaining leadership focus, and commitment to the work ahead.

Immediately upon his assignment eighteen months ago as Acting Secretary, now Secretary of the Air Force Donley began taking action to strengthen performance in the nuclear mission area and to determine the long term actions necessary to rebuild the AF nuclear enterprise. Recognizing that a credible nuclear deterrent is essential for our security and that of our allies and friends, and the essential role the Air Force has in this vital mission area, Secretary Donley emphasized that there is no mission more sensitive than safeguarding nuclear capabilities and maintaining nuclear deterrence, and that the Air Force has a sacred trust with the American people to operate, maintain and secure nuclear weapons. Additionally, he reinforced that rigid adherence to standards, personal accountability at all levels, and leadership are the foundations upon which our success depends. In order to begin to address and overcome cultural, systemic and institutional challenges, Secretary Donley established a Nuclear Task Force that I was ultimately charged to direct. The Air Force Nuclear Task Force was specifically directed to:

- Coordinate and synchronize the corrective actions that were already underway in response to the unauthorized munitions transfer between Minot and Barksdale AFB and the misshipment of sensitive missile parts to Taiwan.
- Develop in coordination with USSTRATCOM, other DoD components and interagency partners, and in all dimensions of Doctrine, Organization, Training, Materiel, Leadership, and Education, Personnel, Facilities (DOTMLPF) and the inspection process, a strategic

roadmap to rebuild and restore capabilities and confidence in our stewardship of the Air Force Nuclear Enterprise.

- Undertake an organizational review to assess and recommend options for alternative assignments of responsibility and/or command arrangements.
- Serve as the Air Force focal point for coordination with and/or support to other nuclear-related panels, commissions, or review groups outside the Air Force.

Soon after assuming responsibilities as Air Force Chief of Staff, Gen Schwartz, together with Secretary Donley established Reinvigorating the Air Force Nuclear Enterprise as the #1 priority in the AF Strategic Plan.

In response to this well-established urgent tempo and clear direction, on 24 October 2008, the AF published the nuclear roadmap titled, "Reinvigorating the AF Nuclear Enterprise." The roadmap established 6 strategic objectives: 1) Develop adequate nuclear-related expertise and properly man the enterprise: right experience, right job; 2) Implement a process for ensuring sustained advocacy, focus, and commitment; 3) Establish clear lines of authority; 4) Implement a disciplined, comprehensive enterprise system-of-systems methodology to ensure day-to-day sustainment excellence; 5) Implement processes to uncover, analyze, address and review systemic weaknesses; and 6) Sufficiently invest in the nuclear deterrence mission area. By accomplishing these objectives we will further safeguard our nuclear capabilities and underwrite the deterrence mission.

To accomplish our first objective of developing adequate nuclear-related expertise and properly manning the enterprise, we baselined every professional military education course and added nuclear related topics at appropriate levels. We also updated Air Force doctrine to include a greater focus on deterrence. We must deliberately create functional experts and highly

qualified leaders and to that end efforts to create a human capital development strategy are underway. These actions will work together to fortify the “culture of excellence” demanded by nuclear stewardship.

To achieve our second strategic objective -- to implement a process for ensuring sustained advocacy, focus, and commitment for the nuclear enterprise, we retooled the internal Air Force resourcing process to include a Nuclear Deterrence Operations Panel to ensure a thorough assessment of nuclear funding requirements. The Air Force Strategic Plan, a key planning document to link future capabilities to the programming process, was created with reinvigorating the nuclear enterprise as the Air Force's #1 strategic priority in mind. Additionally, the Secretary of the Air Force and the Chief of Staff, at their initiative, established and co-chair the Nuclear Oversight Board, composed of the Commanders of nuclear Major Commands, to maintain proper focus and advocacy Air Force-wide.

We completed our largest reorganization since the early 1990s to help achieve the third objective. This reorganization reduced fragmentation of authority and established clear chains of supervision for nuclear sustainment, surety and operations. These changes include: 1) the stand up of Air Force Global Strike Command on 7 August 2009 to centralize the control of the Air Force's operational strategic nuclear assets -- this accomplishment demonstrates a visible commitment to the nuclear deterrence and global strike missions. Tied to this effort, the 20 AF and the ICBM mission transferred to AFGSC on 1 Dec, and 8 AF and nuclear-capable bombers are set to transfer on 1 Feb 2010; 2) the consolidation of all nuclear sustainment matters under Air Force Material Command and more specifically under the Air Force Nuclear Weapons Center; 3) the establishment of a new Air Staff directorate responsible for policy oversight and

integration of our nuclear enterprise activities -- Strategic Deterrence and Nuclear Integration Directorate, A10, stood up in Nov 2008.

A large portion of our fourth objective, implementing a disciplined, comprehensive system-of-systems methodology to ensure day-to-day sustainment excellence, falls to the Air Force Nuclear Weapons Center under the management of Air Force Materiel Command. They are working to establish positive inventory control methodology for the complete life-cycle of weapon system components and 100% accountability of all nuclear weapons related material.

The Air Force completely overhauled its nuclear inspection processes in support of the objective to uncover, analyze, address and review systemic weaknesses. There is 100% oversight of all Nuclear Surety Inspections. All nuclear surety inspection team members from every Major Command attend a common inspector training course and each is certified for inspection duties. Additionally, a common core team of inspectors is being integrated with MAJCOM inspection teams to ensure continuity and depth of expertise. Finally, the Air Force has increased the frequency of "no-advanced-notice" inspections to reinforce the commitment to the highest standards demanded by the nuclear deterrence mission.

Our final objective, to invest sufficiently in the nuclear mission area, requires sustained resource commitment to ensure the credibility of the deterrent: highly competent people and very capable systems.

As we move toward the future, it is imperative that the Air Force continue to build upon and strengthen partnerships across the Department of Defense and other government agencies. The Air Force has had an enduring partnership with the Department of Energy's National Nuclear Security Administration, and will continue that relationship to sustain a credible, safe and secure nuclear stockpile. The Air Force will also continue work with its Joint partners at the

Defense Threat Reduction Agency and the Defense Logistics Agency to operate, maintain and secure its nuclear assets and to present highly capable and reliable deterrence forces to the Combatant Commanders.

The level of commitment, as outlined earlier, required to ensure a sustained level of excellence cannot be attained without 3 vital priorities discussed throughout this testimony, 1) emphasis on developing our leaders and experts, 2) developing and integrating quality products/systems, and 3) developing effective and enduring processes. The AF Nuclear Enterprise has made tremendous strides addressing these vital priorities. However, there is more to be done.

Our initiatives, as outlined in the Air Force Nuclear Roadmap, represent a comprehensive approach to ensure we are aggressively working to reclaim our legacy of excellence in the nuclear mission area. By accomplishing these objectives, we will continue to build on the confidence that our nation and allies have in our commitment to this critical mission.

As General Schwartz noted during the activation of Air Force Global Strike Command, “We allowed immediate urgencies to distract us from the required steady focus on the nuclear mission. This was not the result of intentional negligence, but rather of a series of watershed events beginning in 1989, which led to a redistribution of power from two principal global adversaries to multiple regional hopefuls – a phenomenon that continues to this day. As an unintended consequence of adapting to this new and uncertain post-Cold War environment, we, over the last 16 years or so, realigned the nuclear mission and its advocacy to different organizations within our Air Force.” Our actions over the last fourteen months and our strategic plans for the future demonstrate the Air Force’s steadfast resolve to provide a credible and

visible deterrent force for America; a force that will assure our allies, dissuade proliferators, deter adversaries, and -- should the unthinkable happen and deterrence fail -- defeat any foe.

I would like to thank this committee for its continued support of the United States Air Force.

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DEPARTMENT OF THE AIR FORCE

PRESENTATION TO THE HOUSE ARMED SERVICES COMMITTEE
STRATEGIC FORCES SUBCOMMITTEE
UNITED STATES HOUSE OF REPRESENTATIVES

SUBJECT: Status of the Air Force Nuclear Security Roadmap

STATEMENT OF: Brigadier General Everett H. Thomas, Commander
Air Force Nuclear Weapons Center

January 21, 2010

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Chairman Langevin, Ranking Member Turner and distinguished members of the Committee thank you for this opportunity to discuss the current state of the Air Force's nuclear sustainment efforts. On behalf of a dedicated team of military, civilian and industry professionals, I'm pleased to report our sustainment of the Air Force nuclear enterprise is much improved. We are today continuing the evolution of the Air Force's vision to address gaps in the nuclear enterprise that were evident as early as 2003 when a series of reports highlighted the need for a single manager for nuclear weapons sustainment, consolidation of management sustainment activity and a unified funding strategy. In response, Air Force Materiel Command (AFMC) embarked on an initial two-phase effort to establish a new specialized center responsible for nuclear sustainment. Phase I was completed in March 2006 with the activation of the Nuclear Weapons Center, later renamed the Air Force Nuclear Weapons Center (AFNWC). Continuing progress was made over the next two years consolidating a fragmented nuclear enterprise. The completion of Phase II occurred from April to May 2008 when I was assigned as the first flag-level commander and the Intercontinental Ballistic Missile (ICBM) program office was realigned from the Ogden Air Logistics Center in Utah to the AFNWC. This particular realignment was reminiscent of the Air Force's decision in 1949 to create a "Center of Excellence" with a single responsibility – nuclear sustainment.

As members of this committee know quite well, subsequent reassessments in the wake of well publicized incidents involving stewardship of nuclear resources highlighted the need to go beyond the organizational consolidation envisioned in the two-phase approach into a new third phase. Phase III kicked off with the signing in February 2009 of Program Action Directive (PAD) 08-05 where the Air Force Secretary and Chief of Staff directed a fuller reinvigoration of the nuclear enterprise and the reestablishment of an enterprise-wide culture of zero-defect standards.

While we continue to perform critical self-assessments, independent inspections and senior level progress reviews, we have largely moved out of the discovery and into the execution and validation phases of reinvigorating the nuclear enterprise. If there was one major underlying theme borne out in the various assessments conducted during our discovery efforts, it was this: the focus on existing standards had atrophied over the years. What enabled this decline was a

strategy to organize, train and equip that created three seams in the nuclear world: a lack of nuclear expertise, a lack of nuclear focus and a lack of authority.

The standup of Air Force Global Strike Command as well as establishing the third phase of AFNWC's mission alignment are closing these three seams in the areas of nuclear operations, sustainment and acquisition. For our part, PAD 08-05 gave us two main tasks: streamline sustainment and exercise positive control. What drives our efforts today is a renewed commitment to the oldest, highest, most fundamental and most demanding tenet of nuclear capability – surety. The opening declaration of the policy directive on nuclear surety (AFPD 91-1, *Nuclear Weapons and System Surety*) sums it up best: “Nuclear weapons and weapon systems receive special attention and consideration because of their political and military importance, their destructive power and the potential consequences of an accident or unauthorized act.”

Building upon the premise of “special attention and consideration” within the tasks assigned to us under Phase III, AFMC and AFNWC have made significant progress. We recognized first and foremost that reinvigorating the nuclear enterprise was about the robust standup or expansion of organizations – bringing on board the right talent, in the right numbers, to drive discipline, rigor, oversight, standardization, partnerships and integration.

Along with the assignment of a flag-level officer to AFNWC and the realignment of organizations, the Air Force clearly acknowledged that the Commander, AFMC, General Donald Hoffman, was/is the single four-star officer responsible for nuclear sustainment. This acknowledgement was profound because since 1992, with the inactivation of Strategic Air Command, there was no single four-star officer charged with understanding and articulating the needs of the Air Force with regard to nuclear sustainment below the Chief of Staff. Today, you have a one-star officer working the day-to-day nuclear sustainment issues with oversight of an entire major command; and a four-star officer clearly charged with keeping the Secretary of the Air Force, Chief of Staff of the Air Force and the commander of Air Force Global Strike Command informed and engaged in the sustainment of nuclear weapons, delivery vehicles and associated support equipment.

AFMC created a new directorate (AFMC/A10) focused solely on nuclear matters to act as our major command's (MAJCOM's) outward face to the warfighters and policy makers while

providing critical staff integration and policy formulation to field units. For our part, the AFNWC recently achieved Initial Operating Capability (IOC). This declaration was based on three main factors: reaching at least 50% hired end strength against the Unit Manning Document outlined in PAD 08-05, initiation of the Sustainment and Integration Center (STIC), and successful transition of Continental United States (CONUS) Weapon Storage Area (WSA) operations.

We must, however, put this milestone into perspective. Though AFNWC has existed for over three years, until early 2009, the center consisted of a small command and support staff. PAD 08-05 directed the standup of a robust center with the necessary staffing to provide integration, oversight and discipline to our nuclear sustainment units. In essence, the Air Force Secretary and Chief of Staff vitalized the AFNWC. As such, AFNWC as a whole has only now achieved IOC, and it is still growing.

We've made considerable progress in the area of direct support to the warfighter through the transition of WSA operations under one command. In the mid-1980s, there were 22 CONUS WSAs operated by two commands. By the mid-1990s these had dropped by over half to 10 WSAs operated by three commands. Today the remaining five CONUS WSAs fall under AFNWC. The local, operational units maintain facilities and provide security while AFNWC personnel conduct logistical operations and deliver weapons to the operational unit. This division of duties and responsibilities ensures the strictest control with checks and balances over our assets. Our promise to the warfighter is that we'll be ready whenever they need support. Our promise to the nation, you, and the Department of Defense is that we'll exercise positive control over the weapons as one major command – AFMC. The main advantage of this is having one command team focused on WSA production from a systemic view – balancing, controlling and standardizing expertise, training, evaluation, certification and production while minimizing risks and limiting deviations. Our focus is paying off in enhanced support to meet US Strategic Command and Air Force Global Strike Command requirements. To support the WSAs in the field we created a Directorate of Nuclear Surety to treat the WSAs as a coherent and integral weapon system – performing system-of-systems integration of requirements within civil engineering, communications, security and safety disciplines. This directorate has already

brought together WSA stakeholders from across the Air Force and Navy in recurring council sessions to deliberately work through WSA requirements and to advocate with one voice.

To ensure a robust and enduring ICBM capability through 2030 as directed by Congress we've taken several critical steps to sustain today's aging forces. To date we delivered the last assets for the Guidance Replacement and Propulsion Replacement Programs as well as began Full Rate Production 2 of the Safety Enhanced Reentry Vehicle program. This month will complete our internal Mk21 Fuze Refurbishment Assessment Team analysis. We have aggressively screened existing Mk21 fuzes to ensure the maximum potential number of usable assets for the warfighter. This latest assessment will provide the final refurbishment strategy to meet the warfighter's needs for the most reliable, capable and safest warhead in our inventory. We continue to work closely with our partners at the Ogden Air Logistics Center to certify their refurbishment process for the Mk12A Fuze and together we are meeting all production targets. We continue to assess the stockpile's state of health working very closely with the National Nuclear Security Administration (NNSA) and the national laboratories to promote stockpile sustainment efforts. As such we developed a Joint Air Force/National Nuclear Security Administration Memorandum of Agreement on Test and Assessment of the Nuclear Weapons Stockpile. A key aspect of this agreement refines the roles, responsibilities and deliverables of the Cruise Missile, Gravity Bomb and ICBM Joint Test Working Groups. With testing as a central pillar in sustainment, we brought on board a dedicated Center Test Authority to provide an independent look at all future developmental testing programs in support of acquisition programs as well as current ICBM and cruise missile test launches.

A critical aspect of nuclear sustainment which has suffered from past neglect is the state of nuclear support equipment. These unique assets represent the weakest leg of the critical path to operational capability. For example, without adequate test sets, fielding of fully refurbished Mk21 fuzes cannot occur. Every aspect of maintaining today's warfighting capability or fielding of tomorrow's replacement programs requires one or more unique test assets. We have taken aggressive steps to eliminate production constraints in the repair network caused by non-mission ready support equipment. One such component, the Reentry System Test Set (RSTS), has risen to an 80% availability rate at operational units. In fact, focused engineering support, supply discipline and training have today reduced the RSTS as a limiting factor in WSA production. To

maintain the highest level of focus on our support equipment we have a dedicated program manager at AFNWC assisting field units in conjunction with HQ teams assigned to each of the top most concerning assets. In addition we successfully migrated to the Integrated Maintenance Data System to ensure robust, standardized tracking and analysis of maintenance actions.

In the area of Nuclear Weapons Related Materiel (NWRM) we continue to gain and refine Positive Inventory Control (PIC) through the steady application of standard supply discipline practices. In concert with the Air Force Global Logistics Support Center we've put over 15,000 NWRM assets into Air Force control from the Defense Logistics Agency. Over 29,000 assets are now being managed in the Air Force supply and maintenance systems with 94% and growing under serial number control. PIC facilities are operating at Hill Air Force Base Utah and Tinker Air Force Base Oklahoma. To support this effort we have created a dedicated Program Manager for NWRM and created the AFNWC Sustainment and Integration Center (STIC). The STIC, among other tasks, will provide 24-7/365 tracking of the kind, condition, count and location of all NWRM.

To bring our actions together in a comprehensive way, we've made great strides in deliberate planning. We recently published our baseline ICBM Systems Roadmap – the first robust, system-wide government product of its type in over a decade. Subsequent versions are in progress now and will provide even greater fidelity on costs and program risks. We're also developing a Nuclear Sustainment Decision Matrix Tool which for the first time will apply Multiple Objective Decision Analysis to the task of nuclear sustainment. This tool has brought together all stakeholders, including the NNSA, and promises to be a major factor in how we evaluate complex and competing courses of action ahead.

In fact for all our current and future planning efforts we've worked hand in hand with partners across the Air Force, Strategic Command, the Defense Threat Reduction Agency (DTRA), NNSA, Sandia National and other Department of Energy (DOE) Labs, the Navy's Strategic Systems Programs as well as colleges and universities to ensure an integrated team is working together to address these issues.

Indeed, these partnerships are essential to meeting the challenges ahead. While we've made tremendous progress to date, we're not ready to declare victory yet. It will take years to

overcome decades of atrophy and inattention in nuclear sustainment. As such, we will remain focused on using our resources to execute the plan. The goal is not necessarily to follow a set schedule rigidly, but rather produce sustained results for the nation. To reach Full Operational Capability we must create enduring staff processes and instructions to codify our best practices and standards, successfully advocate for the resources needed to continue on plan, mature and fully man our staffs and finally validate our actions through independent assessments with measurable, repeatable successes in our support to the warfighter.

So, even as we work today's Mk21 and Mk12a Fuze refurbishments we are also providing technical support to senior deliberations over the next joint/common fuze ensuring sustainment risks and equities are represented and understood. As we work on a comprehensive life extension of the versatile B61 we are also studying the need for weapons to meet future delivery platform requirements; all of which will be informed by the upcoming Nuclear Posture Review (NPR). As we refine and execute the roadmaps we also recognize that our current ICBM prime integration contract will soon transition to a new structure. While we continue to lock down all NWRM through unique identifiers and supply chain discipline we also understand there will be occasional discoveries of newly uncovered assets for years to come. We've prepared for this in two ways. First, we have responsive teams ready to take aggressive actions to immediately gain control, evaluate condition and then induct the asset into the supply system under PIC procedures. And second, we will prioritize and execute a comprehensive multi-year plan to demilitarize NWRM assets no longer needed. In fact, the Air Force recently demilitarized over 53,000 nuclear weapons-related legacy assets from ICBM, aircraft and space test programs. Our dedicated NWRM program manager is supported by a dedicated demilitarization program manager. While we shore up today's aging and fragile nuclear support equipment we will develop executable acquisition plans for the next generation. For example, our plan to replace the problematic RSTS involves fielding the Reentry Field Support Equipment (RFSE) program to verify Mk21 functionality, lower lifecycle costs, increase maintenance flexibility, reduce the logistics footprint and incorporate a new fuze with least impact. As always, ensuring enough resources to support the timely fielding of these capabilities remains a critical challenge. And even as we instill a new sense of focus in our nuclear culture and rebuild the training, policies and procedures to support that culture, we can expect it will take time to bring our performance in line with our standards. Recent inspection results reflect our absolute

commitment to thorough, independent and rigorous validation of the military's most exacting, no-defect standards. Just as we are progressing in every area of nuclear sustainment, our inspections are also becoming more progressive – understanding exactly how to look at processes/procedures and how to discern perfection from routine. Across the board, we're getting past just meeting standards to moving clearly on a path to truly exceeding standards when it comes to nuclear sustainment.

But perhaps the most significant challenge that lies ahead is with our most important asset – our people. Today we are behind the power curve as a result of two gaps. First, the existing pool of talent is finite and everyone in the nation's nuclear enterprise is competing for this scarce resource. This naturally leads to the second gap where we must hire a generation of motivated, talented but inexperienced personnel. As such, the future looks bright when this new generation grows to take on the middle and senior level positions of responsibility of tomorrow but today we deliberately leverage a small and aging technical workforce of nuclear professionals. Today's force is heavy with experience at the top and with fresh faces at entry level. But, there is a gap in-between. To manage this balance we have taken deliberate steps to identify key nuclear billets requiring nuclear expertise; to create and deliver relevant nuclear training; to partner with learning institutions to ensure a steady pipeline of expertise; to utilize the Total Force by reaching out to Guard and Reserve partners as a bridge to future permanent manning and, finally, to lay out career paths that develop today's sustainers, logisticians, scientists, engineers, acquirers and program managers to become tomorrow's leaders of the force. We have fielded an Air Force Nuclear Fundamentals Course that encompasses nuclear weapon fundamentals, force structure, nuclear stockpile guidance and planning, nuclear surety, the nuclear enterprise, etc. We intend to partner with DTRA University to share best practices and resources.

In summary, our team has stepped out quickly across AFMC and in partnership with the Air Staff and Air Force Global Strike Command to address the most pressing concerns in the nuclear enterprise. We are very excited about our progress to date and the potential that lies ahead.

Thank you for the opportunity to address these issues with you and I look forward to your questions.

NOT FOR PUBLICATION UNTIL RELEASED BY THE
HOUSE ARMED SERVICES COMMITTEE
STRATEGIC FORCES SUBCOMMITTEE
UNITED STATES HOUSE OF REPRESENTATIVES

DEPARTMENT OF THE AIR FORCE

PRESENTATION TO THE HOUSE ARMED SERVICES COMMITTEE
STRATEGIC FORCES SUBCOMMITTEE
UNITED STATES HOUSE OF REPRESENTATIVES

SUBJECT: . Status of the Air Force Nuclear Security Roadmap

STATEMENT OF: Lieutenant General Frank G. Klotz, Commander
AF Global Strike Command

January 21, 2010

NOT FOR PUBLICATION UNTIL RELEASED BY THE
HOUSE ARMED SERVICES COMMITTEE
STRATEGIC FORCES SUBCOMMITTEE
UNITED STATES HOUSE OF REPRESENTATIVES

Chairman Langevin, Ranking Member Turner, distinguished Members of the Committee, it is an honor to appear before you today for the first time as the Commander of Air Force Global Strike Command (AFGSC). I thank you for the opportunity to discuss the current status of the Air Force's newest major command.

Upon assuming office in summer 2008, Secretary of the Air Force Michael Donley and Air Force Chief of Staff General Norton Schwartz launched a comprehensive, multi-faceted roadmap designed to restore a culture of compliance, rebuild the nuclear enterprise, invest in nuclear capabilities, and ensure nuclear weapons will remain safe, secure and reliable. Air Force Global Strike Command was established as a key part of this roadmap. This Command is a visible commitment to the nuclear enterprise, clearly aligning the Intercontinental Ballistic Missile (ICBM) and nuclear-capable bomber forces under a single chain-of-command, providing focused oversight and advocacy of the Air Force's nuclear forces.

The Command was founded on the premise that as important as other defense priorities may be, none are more important than the responsibility for operating, maintaining, securing and supporting nuclear weapons. For if there is one unchanging, immutable truth about this awesome capability — it is that it demands constant and undivided attention. This was true in the past, it is true now, and it will be true in the future, regardless of the size or composition of our nuclear deterrence and global strike forces.

Last year, in a speech in Prague, Czech Republic, President Obama made this point perfectly clear. "Make no mistake," he said, "as long as these weapons exist, the United States will maintain a safe, secure and effective arsenal to deter any adversary, and guarantee that defense to our allies." This, then, is the fundamental mission of Global Strike Command: to develop and provide safe, secure and credible nuclear deterrence and global strike forces both to

deter attacks and assure our allies. It performs this mission with an elite, highly disciplined team of American Airmen with special trust and responsibility for the most powerful weapons in our Nation's arsenal.

Air Force Global Strike Command is being established in a methodical, step-by-step approach, to once again bring all Air Force long-range, nuclear-capable forces under a single major command.

The first phase was the stand-up of a provisional command in January of last year at Bolling Air Force Base, under the leadership of Major General James Kowalski, now the Vice Commander of AFGSC. Its principal tasks were to develop the initial planning documents, to define the manpower requirements, and to begin actually assigning people to the Command.

The next phase took place on August 7th, with the formal activation of the Command at Barksdale Air Force Base, Louisiana. Upon activation, the first order of business was to ensure functionality of the headquarters, to include moving our newly-assigned personnel into existing facilities at Barksdale Air Force Base and providing the necessary communications and information technology for them to perform their duties. Each of our divisions began the process of reviewing and, if necessary, writing new instructions and guidance for the field units and forces slated to become part of the Command. A Response Task Force and Crisis Action Team were established, trained and equipped to respond to any serious incidents, including weapon system accidents and natural disasters. Our Inspector General developed a concept of operations that ensures AFGSC has a rigorous inspection process that instills an uncompromising adherence to standards. These are but a few of the hundreds of action items from the Chief of Staff-approved Program Plan the staff addressed while preparing to take control of operational forces.

The first transfer of forces occurred on Dec. 1, when Global Strike Command assumed responsibility for the intercontinental ballistic missile mission. Originally part of the Strategic Air Command, the Air Force's ICBMs were assigned to Air Force Space Command in 1993. Under the new command arrangements, 20th Air Force, headquartered at F.E. Warren AFB, Wyo. and its three ICBM wings — the 90th at F.E. Warren AFB, the 341st at Malmstrom AFB, Mont., and the 91st at Minot AFB, N.D. — now fall under Global Strike Command. On the same day, AFGSC also took charge of the ICBM test mission of the 576th Flight Test Squadron at Vandenberg AFB, Calif. and the targeting analysis mission of the 625th Strategic Operations Squadron at Offutt AFB, Neb. The transfer of these organizations added approximately 8,500 personnel to the Command. In conjunction with mission transfer, I personally visited each of the bases to meet with senior military leaders and civic leaders, and conducted "town-hall meetings" with all assigned airmen. Additionally on Dec 8, the AFGSC Inspector General conducted no notice limited Nuclear Surety Inspections simultaneously at all three missile wings—and, all three passed.

On Feb. 1, the transfer of forces to AFGSC will be complete as the new Command assumes responsibility for 8th Air Force and the long-range, nuclear-capable bomber mission from Air Combat Command. The Mighty Eighth has its headquarters at Barksdale AFB, La., and exercises command over the two B-52 wings, at Barksdale and Minot, and the B-2 wing at Whiteman AFB, Mo. Over 13,100 personnel are assigned to 8th Air Force.

Air Force Global Strike Command will achieve full operational capability in late summer 2010 with about 900 personnel on board at the headquarters and nearly 23,000 people in the entire Command.

The Minuteman III ICBMs as well as the nuclear-capable B-52 and B-2 bombers which will be a part of AFGSC have been, and most importantly remain, essential components of our nation's armed forces. Each makes important and unique contributions to the security of our nation, as well as the security of our allies and friends.

Of the three legs of the strategic nuclear triad, the ICBMs are the most responsive to national leadership. Continuously on alert and deployed in 450 widely dispersed locations, the size and characteristics of the overall Minuteman III force presents any potential adversary with an almost insurmountable challenge should they contemplate attacking the United States. Because an adversary cannot disarm the ICBM force without nearly exhausting their own forces in the process, and at the same time, leaving themselves vulnerable to our sea-launched ballistic missiles and bombers, they have no incentive to strike in the first place. In this case, numbers do matter. The ICBM contributes immeasurably to both deterrence and stability in a crisis.

The B-52 and B-2 are also critically important components of the strategic nuclear triad because of their great flexibility and versatility. They can avoid flying over sensitive areas in ways ballistic missiles may not be able to do. They can be used to signal resolve and intent through very visible steps to increase their readiness or to deploy them to different locations. Just as the various components of the triad provide mutually reinforcing, complementary capabilities, so too do the two different bombers, with the B-52 providing unique, unmatched stand-off capabilities and the B-2 providing the capability to attack heavily defended targets.

It is also worth noting that Air Force Global Strike Command will assume lead command responsibilities for the venerable UH-1N Huey helicopter that currently supports field operations and security at all three missile bases. While this helicopter remains a serviceable aircraft, thanks to the expertise and efforts of our helicopter squadron leaders and our contractor logistics

support, the UH-1N fleet is aging and its ability to meet post 9/11 security requirements is constrained by cargo capacity, range and speed.

The Air Force is planning to acquire a Common Vertical Lift Support Platform (CVLSP) to replace the current UH-1N fleet. It is considering an incremental acquisition approach, the first of which might be a production contract beginning in fiscal year (FY) 12. To this end, Air Force Material Command has issued a Sources Sought Synopsis/Capability Request For Information to obtain market insight into potential solutions and sources capable of providing at least 16 aircraft no later than the end of FY 17.

The nuclear deterrence and global strike forces of the Air Force remain vitally important to the nation, as well as to our friends and allies around the world. For the women and men of Air Force Global Strike Command that means we have an extraordinarily important mission; noble and worthy work to perform; work that demands the utmost in professionalism, discipline, excellence, pride and esprit.

For as Secretary of Defense Gates noted in his remarks to the bomber and missile personnel at Minot Air Force Base in December 2008, "Handling nuclear weapons – the most powerful and destructive instruments in the arsenal of freedom – is a tremendous responsibility. We owe you the attention, the people, and the resources you need to do the job right... Yours is the most sensitive mission in the entire United States military."

Everyone across America — and the world — should know and never doubt that the senior leadership of the Air Force is extremely proud of the Airmen who currently serve in 8th and 20th Air Forces, and what they do every day. Indeed, our Airmen are doing truly magnificent work — flying sorties and performing alert duties; keeping our bombers flying and our missiles ready; defending our flight lines and launch facilities; deploying to Southwest Asia

and Guam; supporting our Airmen, their families and retirees; and caring for our wounded warriors. With every sortie, every alert tour, every shift, every post and every support activity — they demonstrate over and over that they rank among the best and brightest Airmen who have ever served in the United States Air Force.

This new Command reflects the Air Force's firm and unshakable conviction that strategic nuclear deterrence and global strike operations require a special trust and responsibility — one that we take very seriously. Air Force Global Strike Command will serve as a single voice to maintain the high standards necessary in the stewardship of our Air Force's strategic deterrent forces.

**WITNESS RESPONSES TO QUESTIONS ASKED DURING
THE HEARING**

JANUARY 21, 2010

RESPONSE TO QUESTION SUBMITTED BY MR. LANGEVIN

General THOMAS. We maintain very strict Operational Security (or OPSEC) to ensure only those with a need to know are involved in weapons movements. This is spelled out to us in DOD *Nuclear Weapons Security Manual* (DODM S-5210-41-M) and the Air Force Nuclear Weapons Security Manual (AFM 31-108): "At a minimum, all information that would reveal a movement is planned or scheduled shall be classified Confidential." "Information concerning times, routes, and destinations shall be handled on a strict need-to-know basis and controlled as appropriate. Dissemination, display, and access to information concerning impending or actual movements shall be limited to the minimum essential personnel to support the mission."

As the Air Force Service Logistics Agent for all nuclear weapons related movements, the 708th Nuclear Sustainment Squadron (a unit under the 498 Nuclear Systems Wing and the Air Force Nuclear Weapons Center at Kirtland AFB), coordinates all movements with the National Nuclear Security Administration and/or Air Mobility Command. Mission planners accomplish all exchanges and mission requirements regarding weapons movements via secure (classified) communications, such as the Defense Integration and Management of Nuclear Data Services (DIAMONDS). Local mission planning meetings are also held in secure locations where information is handled and verified on a strict need-to-know basis and any compromise results in mission rescheduling.

Movements on a local level, for example within the ICBM missile field or the Weapons Storage Area, are also planned, scheduled, and executed under a similar OPSEC umbrella. For instance, movements within the weapons storage area are coordinated face-to-face between munitions control and Air Force Global Strike Command (AFGSC) security forces. They are limited to only those personnel who have a need to know. Movements outside the weapons storage area are coordinated in a classified meeting in advance with the host wing. Configuration, location, routes, travel time and security requirements are discussed. The meeting includes munitions, missile maintenance, security forces, operations, wing leadership, explosive ordnance disposal technicians, wing safety and Office of Special Investigations (OSI) agents. Access to this meeting is limited only to those who are listed on an entry authority list and have a need to know. The host AFGSC wing signs for custody prior to departure and oversees all aspects of off-base movements. [See page 10.]

QUESTIONS SUBMITTED BY MEMBERS POST HEARING

JANUARY 21, 2010

QUESTIONS SUBMITTED BY MR. LANGEVIN

Mr. LANGEVIN. How is the Air Force measuring progress in its implementation of the Roadmap-identified corrective actions (i.e., when do you know you're successful)? How have Air Force changes and adjustments to the nuclear enterprise impacted mission performance?

General ALSTON. We are using a composite set of indicators to measure our performance. In addition to tracking the progress of the initiatives laid out in the Roadmap entitled, "Reinvigorating the Air Force Nuclear Enterprise," we are using a broad range of tools to enhance our understanding of the state of the nuclear enterprise—inspections, staff assistance visits, exercises, mentors, resourcing levels, safety reports, surveys, to name a few. The standards for performance are clear, so as a snapshot in time, we have good insight—making progress, more to be done. We believe we are setting the conditions for positive, long-term stewardship, and we are building on our current tools to improve the quality of that longer-term assessment process. The changes we are making need to continue to ensure that the Air Force consistently meets USSTRATCOM requirements and delivers effective strategic deterrence by performing safe, secure, precise, reliable operations at all our nuclear units, as we are doing today.

Mr. LANGEVIN. Are there any outstanding challenges or impediments to your ability to implement the corrective actions identified in the Roadmap?

General ALSTON. No. With only 17 months since the publication of our comprehensive Roadmap, and with the magnitude of some of the key changes that have been implemented, we are early in a multi-year effort. Our priorities have been clearly established by the Secretary of the Air Force and the Chief of Staff: #1 – Continue to Strengthen the Nuclear Enterprise. Our challenges were created over a period of years and we will not get to where we want to be for a period of time. But we understand our challenges, have a plan to meet them head on, all the while performing safe, secure, reliable operations and contributing substantial deterrence value every day.

Mr. LANGEVIN. Who has responsibility for the programming, planning, budgeting and execution (PPBE) process for nuclear forces and capabilities within the Air Force? Should Congress expect to see additional resource requests to implement the Roadmap?

General ALSTON. A8 (Strategic Plans and Programs) manages the programming, planning, budgeting and execution (PPBE) process for the USAF which includes AF nuclear forces and capabilities. Within A8, a Nuclear Deterrence Operations (NDO) panel was established before the FY11 POM that has specific responsibility for nuclear programming.

The FY10 and FY11 budgets have increased investments in the AF nuclear enterprise which addressed Roadmap implementation issues. The AF will continue to strengthen excellence in the nuclear enterprise. All nuclear resource requirements will be thoroughly examined through the AF Corporate Structure to determine the correct balance of funding in relation to other AF missions.

Mr. LANGEVIN. The recent relief of two commanders at Minot with nuclear forces responsibilities was an indication that improvements to the Air Force nuclear enterprise still need to be made. What are the most pressing challenges that still must be addressed?

General ALSTON. Though the relief of the commanders at Minot was extraordinary, holding leadership accountable is not. Commanders at all levels of leadership in the AF are focused on daily mission performance and have made it clear that performance matters. Having said that, we recognize that our prior shift in focus to other vital mission areas had a cost in the nuclear mission area and that this shift occurred over a period of years. The course we are on will require a considerable amount of time to achieve the persistent level of performance we are seeking. The key to our success in the future is the deliberate development of our people to ensure they are functionally proficient and grow into seasoned leaders. We have made significant changes in the areas of training, education, tracking nuclear experience, modifications to Professional Military Education curricula, expanding fellowship opportunities as means to address improving the deliberate development of our

outstanding airmen. We are focused on ensuring our airmen are functional experts and seasoned leaders.

Mr. LANGEVIN. With the reorganization of nuclear focus and expertise in the Air Force, what organization(s) now have lead responsibility for Air Force nuclear requirements, nuclear-related acquisitions, nuclear force structure, and advocating for nuclear capabilities?

General ALSTON. The newly created AFGSC is responsible for the organize, train and equip function of AF strategic forces (ICBM, B-2, B-52) while USAFE and ACC are responsible for organizing, training and equipping all dual-capable fighter aircraft. Nuclear capabilities advocates on the headquarters staff include but are not limited to AF/A10, SAF/AQ, AF/A8PN, and AF/A5XC. Nuclear capabilities advocates from the MAJCOMs include but are not limited to AFGSC, USAFE, AFMC, AMC, ACC, and PACOM. And AF/A10 provides the key integration piece and collaborates with established Air Force acquisition and requirements process owners and has oversight to ensure uniformity of nuclear policy, guidance, requirements and advocacy across the HAF staff and throughout the broader nuclear enterprise.

Mr. LANGEVIN. There appear to be several Air Force-related nuclear forces issues requiring decisions and/or investments in the next few years, such as: the B-61 life extension program, a nuclear-capable Next Generation Bomber, dual-capable Joint Strike Fighter, and a potential ICBM follow-on. How will the improvements made to the Air Force Nuclear Enterprise assist in these decisions?

General ALSTON. The re-organized Air Staff and MAJCOM structures are providing for institutional focus and coherent, consistent advocacy for nuclear capabilities. AF Global Strike Command, along with the other commands with nuclear responsibilities, establish nuclear requirements. The Air Staff, through the Assistant Chief of Staff for Strategic Deterrence and Nuclear Integration stewards the requirements into the AF requirements and resourcing structures and provides propensity for these capabilities. The integrated result ensures these capabilities compete effectively for AF resources.

Mr. LANGEVIN. As the Air Force looks ahead, what are the key challenges to sustaining the nuclear-capable ICBM and bomber force? Are there any key decisions regarding these forces that will have to be made in the near- to mid-term?

General ALSTON. Key challenges to sustaining the nuclear-capable ICBM and bomber force include: ensuring current capabilities are viable and credible, maintaining the ICBM industrial base and intellectual/engineering capability supporting fleet modernization, and continuing legacy bomber sustainment/modernization activities.

Key decisions being reviewed/evaluated by the Air Force in the near- to mid-term timeframe include making investments in the current ICBM system to maintain its viability/capability to 2030. Additionally, the Air Force is continuing to refine the requirements for developing a new long-range strike platform and developing requirements for a new nuclear-capable stand-off weapon system.

Mr. LANGEVIN. Please discuss Air Force efforts to sustain a nuclear career field, including identifying clear career paths, cultivating expertise, and identifying leadership opportunities for airmen to ascend in nuclear-related careers.

General ALSTON. As part of a comprehensive strategy to ensure we have the right person in the right job at the right time and to improve our nuclear experience levels, we have a variety of initiatives underway.

We identify and track nuclear experienced individuals by applying Special Experience Identifiers to their record. We have established key nuclear billets where we have well-defined requirements for specific nuclear expertise. We baselined all nuclear-related training and education and revised course content for all levels of AF Professional Military Education. We increased the number of fellowships aligned with the nuclear mission. Additionally, we are in the process of creating a Human Capital Development Strategy that leverages all these initiatives while ensuring our policies, processes and authorities properly align to ensure each airman associated with the AF nuclear enterprise is fully prepared to perform both technical duties and to carry out leadership responsibilities in this vital mission area.

Mr. LANGEVIN. Please discuss Air Force nuclear enterprise personnel requirements and how the Air Force is addressing those requirements.

General ALSTON. The Deputy Chief of Staff, Manpower, Personnel and Services (AF/A1) and Assistant Chief of Staff, Strategic Deterrence and Nuclear Integration (AF/A10) are partnering to develop a nuclear-focused Human Capital Strategy (HCS) to ensure nuclear mission success.

A key element of the HCS is the systematic review of force development requirements across components of the Nuclear Enterprise. Over 2,500 nuclear billets were added as part of the stand-up of Air Force Global Strike Command, expansion of the AF Nuclear Weapons Center, the stand-up of HQ/USAF A10 and fortifying other

organizations within the Air Force nuclear enterprise. We have already made changes to training, education, tracking nuclear experience, identifying key nuclear billets, and modified curricula at all levels of AF Professional Military Education. We are focused on ensuring our airmen are functional experts and seasoned leaders.

Mr. LANGEVIN. The Navy has a 30-year shipbuilding plan and a long-term SSBN plan. Does the Air Force have a long-term plan for the sustainment of its nuclear deterrence capabilities?

General ALSTON. The Air Force has sustainment plans for all of its nuclear missions: dual-capable aircraft, land-based ICBMs, stand-off missiles and the platforms to deliver gravity and stand-off weapons.

In the near-term the Air Force plans to sustain extended deterrence capabilities by recapitalizing the dual-capable aircraft fleet. In the mid-term the Air Force has developed a plan to field a new airborne Long Range Strike capability, stand-off capability, and a Roadmap to sustain the Minuteman III fleet through 2030 per congressional direction. For the long-term the Air Force has developed plans to sustain the legacy bomber fleet through 2040.

Mr. LANGEVIN. Do you expect the Air Force Nuclear Enterprise Roadmap to affect the working relationship between the Air Force and other institutions involved in the nuclear enterprise—namely, STRATCOM, the Nuclear Weapons Council and the NNSA? If so, please explain.

General ALSTON. Yes. The Roadmap has increased focus throughout the nuclear enterprise and has strengthened and broadened our relationships with other stewards of our nuclear deterrence force. Establishing AFGSC clarifies and strengthens the relationship and forces presented to the USSTRATCOM Commander. USSTRATCOM nuclear requirements are well understood because of the working relationship established between USSTRATCOM/J8 and A10. Additionally, interactions between the Navy, NNSA and the Air Force on everything from a B-61 Life Extension Program planning, joint fuze program and stockpile stewardship are more frequent and of higher quality than in the past. We would also include OSD Policy and AT&L, with whom we have highly functioning relationships.

Mr. LANGEVIN. What sort of interaction does the NWC have with the Defense Logistics Agency (DLA)?

General THOMAS. The Air Force Nuclear Weapons Center (AFNWC) has formed a partnership with the Air Force Global Logistics Support Center (AFGLSC) which capitalizes on and enhances the Air Force's Supply Chain Management expert's core competencies to ensure effective, dedicated nuclear supply chain management support. The AFGLSC has played a key role in defining and instituting a Nuclear Weapons Related Materiel Positive Inventory Control concept of operation to deliver the ability to identify, protect and account for the location and condition of NWRM anywhere in the supply chain at any point in time.

Specifically, the AFNWC, AFGLSC and DLA have worked closely together in establishing the Nuclear Weapons Related Materiel (NWRM) Positive Inventory Control (PIC) Storage Facilities at Hill AFB, UT and Tinker AFB, OK. The AFGLSC is the principal supply chain interface with DLA and has worked closely over the last year to identify and transfer over 12,000 NWRM assets from various DLA storage locations to these facilities. DLA is providing the current information technology system for these facilities and is providing needed training and support for operations. Additionally, the AFNWC also participates in a weekly telecon with DLA and the Air Staff addressing joint nuclear-related actions/issues.

Mr. LANGEVIN. Could the consolidation of nuclear weapons sustainment activities at the Nuclear Weapons Center have mitigated against or prevented the mistaken shipment of missile components to Taiwan that occurred in 2006? How so?

General THOMAS. It could have mitigated the incident; however, human error played a role in the mistaken shipment and prevention requires a continuous concerted effort by all involved across the nuclear enterprise and our mission partners.

— The AFNWC was stood up to reestablish a centralized nuclear sustainment focus and expertise that had grown fragmented over the years. The increased nuclear oversight of, and collaboration with, other AFMC centers and Air Force Major Commands is already paying dividends in terms of asset control, improved policies, procedures, training and tools.

— New Air Force policy on Nuclear Weapons Related Materiel Management, in parallel with updated maintenance, supply, transportation and acquisition policies, are providing clearer guidance and closing the gaps for Air Force personnel.

— The AFNWC has formed a partnership with the Air Force Global Logistics Support Center (AFGLSC) which capitalizes on and enhances the Air Force's Supply Chain Management expert's core competencies to ensure effective, dedicated nuclear supply chain management support. The AFGLSC has played a key role in defining and instituting a Nuclear Weapons Related Materiel Positive Inventory Control con-

cept of operation to deliver the ability to identify, protect and account for the location and condition of NWRM anywhere in the supply chain at any point in time.

— The web-based Positive Inventory Control (PIC) Fusion capability is providing the AFGLSC, AFNWC and other AF stakeholders with unprecedented visibility and control of NWRM assets. It has enabled the control of each NWRM transaction and tracking asset movements across the AF enterprise.

Mr. LANGEVIN. What area(s) do you believe are most challenging for your organization?

General THOMAS. While we've made tremendous progress to date, we're not ready to declare victory yet. Our biggest challenge is time. It will take years to overcome decades of atrophy and inattention in nuclear sustainment. As such, we will remain focused on executing our plan and bringing resources to bear. To reach Full Operational Capability, we must create enduring staff processes and instructions to capture and codify our best practices and standards, successfully advocate for adequate resources, mature and fully man our staff, and finally, validate our actions through independent assessments with measurable, repeatable and auditable successes in our support to the warfighter.

In this regard, perhaps the most significant challenge that lies ahead is with our most important asset – our people. Today we are behind the power curve as a result of two gaps. One challenge is that the existing talent pool is finite and everyone in the Nation's nuclear enterprise is competing for this scarce resource. This naturally leads to the second challenge, where we must hire, train, and retain a generation of motivated, talented, but inexperienced personnel. As such, the future looks bright when this new generation grows to take on the middle and senior level positions of leadership and responsibility of tomorrow. Today, however, we are leveraging a small and aging technical workforce of nuclear professionals. Today's force is heavy with experience at the top, and full of fresh faces at entry level, leaving a gap in between. To manage this challenge, we have taken deliberate steps to identify key nuclear billets requiring nuclear expertise; to create and deliver relevant nuclear training; to partner with learning institutions to ensure a steady pipeline of expertise; to utilize the Total Force by reaching out to the Guard and Reserve partners as a bridge to future permanent manning and, finally, to lay out career paths that develop today's sustainers, logisticians, scientists, engineers, acquirers and program managers to become tomorrow's leaders of the force. We have fielded an Air Force Nuclear Fundamentals Course that encompasses nuclear weapon fundamentals, force structure, nuclear stockpile guidance and planning, nuclear surety, the nuclear enterprise, etc. We plan to partner with the Defense Threat Reduction Agency University to share best practices and resources. Finally, we are working with the Air Staff and Air Force Personnel Center to build a robust and well-managed nuclear workforce. We are playing a central role by bringing together key players throughout DOD to solve our nuclear workforce issues together.

Mr. LANGEVIN. Air Force nuclear units continue to receive 'unsatisfactory' ratings in their nuclear surety inspections (e.g., 498th Nuclear Systems Wing at Kirtland AFB, NM in November 2009; 69th Bomb Squadron at Minot AFB, ND in September 2009; and 341st Missile Wing at Malmstrom AFB, MO in November 2008). Please discuss why you believe these 'unsatisfactory' ratings continue to occur and any key patterns that have emerged from these inspections. How has the Air Force changed, or made improvements to, its nuclear inspections and procedures? If changed, what shortcomings were improved? In what measurable or quantitative ways have operations improved as a result of these changes?

General THOMAS. The Air Force Secretary and Chief of Staff have made continuing to strengthen the nuclear enterprise the Air Force's top priority. Across the Air Force, and especially within the nuclear enterprise, their focus is on renewing the Air Force's commitment to long-established standards of excellence. The rigor of our nuclear surety inspections demonstrates a new commitment to the highest levels of performance. We can expect that it will take time to fully bring performance in line with our standards. The inspection results you cite represent our absolute commitment to thorough, independent and rigorous validation of this mission's most exacting, no-defect standards. There is no discernable pattern to these specific inspection results except one: they re-confirm the atrophy of focus on existing standards over the years that has been well documented and is well known to the committee. And so, these results were largely anticipated when a renewed emphasis on higher inspection standards met with years of declining focus. With every inspection, pass or fail, we hone our craft and conduct rigorous root cause analyses to continuously improve. But remember, these results represent a snapshot based on a limited sample size. The real progress is demonstrated by today's team of military, civilian and industry professionals who are delivering safe, secure and reliable nuclear capability to the warfighter. Together, we all will do even more to ensure 100

percent precision and reliability in our nuclear logistics – every task, every day, 100 percent of the time.

Mr. LANGEVIN. Has the establishment of Global Strike Command affected operations within the 8th and 20th Air Forces? How so?

General KLOTZ. AFGSC was established to consolidate the Air Force's nuclear-capable bomber and ICBM forces under a single command, one that provides sharp focus to the organize, train, and equip functions necessary in the stewardship of our Nation's deterrent forces. This new Command reflects the Air Force's firm and unshakable conviction that nuclear deterrence and global strike operations are a special trust and unique responsibility.

The immediate changes may be transparent to many. Eighth and Twentieth Air Forces, as well as their subordinate units, have the same commanders and perform the same mission as they did before their transfer to AFGSC. Likewise, their personnel perform their duties in accordance with the same technical orders, Air Force instructions, directives and checklists as before.

What is different is they now have an advocate and champion focused solely on the common interests and requirements unique to their missions. The Command headquarters is populated by personnel who have unique and extensive knowledge of and experience with the nuclear deterrence and global strike missions. A high level of headquarters expertise and interest is essential to establish and maintain a culture of excellence and a climate of discipline in order to provide the Nation with a safe, secure and effective deterrent. More focused and detailed AFGSC headquarters oversight of unit operations, along with highly responsive staff, has already made a positive impact.

Mr. LANGEVIN. The increased utilization of bomber platforms in the conventional role over the last five years and the simultaneous re-emphasis the Air Force is placing on the nuclear enterprise may combine to place real ops tempo stress on airmen and their families. With the Air Force having designated fiscal year 2010 as "Year of the Air Force Family", what reporting methods, metrics and goals are you implementing to monitor the ops tempo and quality of life for personnel within the bomber enterprise to hopefully avoid over-stressing the force?

General KLOTZ. AFGSC is establishing programs that recognize exceptional innovation and performance and executing a strategic communication strategy to foster personal readiness, morale, and professional development. AFGSC will be conducting periodic self-assessments to define, program, and allocate resources for Family Care programs. The Command tracks several key indicators—including retention rates and Aviator Continuation Pay acceptance rates—to help ascertain the "health" of the force. In addition to health of the force, the AF conducts periodic studies and surveys measuring quality-of-life. The data from these studies guide AF spending prioritization on quality-of-life programs and initiatives. AFGSC will continue to actively evaluate quality-of-life programs to improve the support we provide to airmen and their families.

Finally, a major priority of AFGSC will be more effective synchronization of exercises and inspections with deployments to ensure adequate readjustment time between events in order to reduce stress on airmen.

Mr. LANGEVIN. Please discuss the rationale for why Air Force nuclear forces in the U.S. Air Forces-Europe (USAFE) region are not included in Global Strike Command or the Nuclear Weapons Center? How does the Air Force ensure consistent implementation of policy, operational procedures, and standards across these different nuclear organizations? What area(s) do you believe are most challenging for your organization?

General KLOTZ. Air Force nuclear forces in Europe remain under the control of USAFE is due to the unique political and operational requirements these weapons have within NATO. In addition, the Schlesinger Phase II: Review of the DOD Nuclear Mission report stated in regard to USAFE's policy, operational procedures, and standards:

USAFE has worked these issues for years, and has demonstrated strong leadership in the surety of the nuclear weapons in Europe, always remaining cognizant of host nation perspectives. For these reasons, the Task Force recommends that USAFE retain control of the WS3s rather than placing them under the NWC.

The operational control of the USAFE nuclear forces was discussed in a meeting between General Brady (COMUSAFE) and Brigadier General Thomas NWC/CC and it was agreed that the nuclear forces in USAFE would remain under the control of USAFE.

The scope of the NWC is further documented within the "Headquarters United States Air Force, Program Action Directive 08-05, Implementation of the Secretary of the United States Air Force and Air Force Chief of Staff Direction to Execute

Phase III of the Air Force Nuclear Weapon Center's Mission Alignment," which states:

AFNWC assuming responsibility for all CONUS-based, nuclear weapons under the custody of the Munitions Accountable Systems Officer (MASO), nuclear cruise missiles and reentry vehicle/system maintenance, storage, accountability, specific handling and control, and select Force Development Evaluation (FDE) functions.

The Air Force will continue to provide consistent implementation of policy, operational procedures, and standards across these different nuclear organizations through the direction and nuclear integration efforts being conducted by A10 and the oversight and inspection responsibilities of SAF/IG. The efforts of USAFE and those of NWC are providing safe, secure and effective weapons and are adhering to all Air Force nuclear policy, operational procedures, and standards.

Mr. LANGEVIN. Most of the reviews conducted subsequent to the mistaken shipment of nuclear weapons from Minot AFB to Barksdale AFB in August 2007 identified failures in leadership, training and culture as among the contributing factors to the incident. This past October, more than a year after the incident, both the 91st Missile Wing Commander and 5th Bomb Wing Commander at Minot were relieved of their commands for lack of senior leadership confidence in their ability to lead. What are the key challenges to changing the culture at Minot AFB? What can be done to assist the new wing commanders there as they seek such changes?

General KLOTZ. Air Force Global Strike Command is dedicated to assisting subordinate units in successfully accomplishing their missions. AFGSC sees it as a major command's responsibility to provide resources and unambiguous guidance in a way that helps them maximize mission effectiveness.

A key challenge for AFGSC is to restore a force with experience in the nuclear mission. Expertise requires time to develop, and the Command has established a foundation to support this growth in the years ahead. Within the personnel system, the Command has already begun to identify, track, and carefully manage airmen with skills in the nuclear enterprise.

To help restore a culture of excellence in the nuclear enterprise, the AFGSC Commander personally visited each AFGSC base immediately upon assumption of the missile and bomber missions. He used these opportunities to provide senior military leaders and airmen alike with his philosophy and expectations. The Commander's message emphasized the vitally important role of nuclear deterrence and global strike operations, not only to the Nation, but to its friends and allies around the world. The credibility of our Nation's strategic deterrence depends not only on capable systems, but also on elite, highly disciplined airmen who consistently adhere to the highest standards. Finally, the Commander reinforced personal responsibility and accountability for individual and team performance.

Mr. LANGEVIN. Is the attention on Minot obscuring challenges at other bases? If so, please discuss.

General KLOTZ. No, Headquarters Air Force Global Strike Command is intensely focused on all six wings assigned to the Command. It proactively monitors operations, maintenance, security and support through daily status briefings, the tracking of key metrics, a reinvigorated inspection process, and an aggressive program of base visits by the Commander, Vice Commander, and senior functional staff directors.

QUESTIONS SUBMITTED BY MR. TURNER

Mr. TURNER. What offices or processes are in place to proactively assess the applications of new technologies to the nuclear enterprise?

General THOMAS. Air Force Nuclear Weapon Center (AFNWC) is working with Air Force Global Strike Command (AFGSC) to identify and formalize our Science and Technology (S&T) process. AFNWC and AFGSC are working to create an operating instruction that includes processes for interfacing with the Air Force Research Laboratory (AFRL), Department of Energy and other nuclear stakeholders to ensure all S&T organizational perspectives are incorporated.

In addition, many nuclear agencies participate in the ICBM Long-Range Planning (ILRP) working groups and conferences. Members of the ILRP include the Headquarters Air Force (HAF), US Strategic Command (USSTRATCOM), AFMC, AFNWC, AFGSC, AFRL, Nuclear Wings. There are plans to extend invitations to Department of Energy, National Laboratories, industry and academia. The ILRP focuses on looking at near-term, mid-term and long-term sustainment and technology capability gaps to determine what's needed to mitigate these gaps. The ILRP is developing a technology Roadmap that communicates prioritized needs to the S&T community. The nuclear community is leveraging existing S&T processes used by

Air Force Space Command as a starting point. The nuclear community will take best practices to refine the nuclear S&T process.

The Nuclear S&T Roadmap will prioritize S&T needs based technical risk, Nuclear Master Plan needs, and available funding. AFGSC's Master Plan will communicate capability needs based on information contained in several sources to include: ICBM Master Plan, Weapon System Effectiveness Report, input from the technology working group, etc.

The AFNWC is utilizing the Technology Development and Transition Strategy (TDTS) process. This process continuously assesses emerging technology as it matures. It is designed to increase confidence levels for transitioning technology. This includes establishing stage gates at certain intervals of the technology maturation process. This process includes sustainment, logistical, testing, and business strategy considerations from inception to transition. This process ensures the technology meets all warfighter considerations prior to fielding.

Mr. TURNER. What technologies have been considered for process improvements since 2008?

General THOMAS. Technologies are being continually assessed for their utility in improving the operation of the Nuclear Enterprise.

Examples include:

ICBM Demonstration and Validation: Program goal centers on the preservation of ICBM critical skills, technologies, and unique capabilities. The technologies developed during this process will lead to the reduction of technical risks to current and future ICBM Systems. This process will also lead to the maturation of technology to a point that allows for the transition from lab environment and tech insertion into weapon system sustainment and acquisition efforts. Application Areas include: Guidance, Propulsion, Reentry Vehicle, Command and Control, and Long-range Planning.

The Air Force has implemented data fusion technology to provide enterprise visibility of NWRM assets in maintenance, supply, contract repair and transportation. Key logistics domain systems are being reviewed and mapped to make data from each of these systems available for consolidation into a "fused" view enabling visibility of accountable assets by serial number. This data fusion also supports the tracking and control of all asset transactions and movements. The PIC Fusion Center is implementing alerts and notifications if assets visibility is lost, serial number or inventory balance discrepancies appear, or an asset is late to arrive at its destination when being transported.

The Air Force is leveraging state-of-art identification technologies and information technologies to deploy Positive Inventory Control. All NWRM assets are required to implement Unique Item Identification (UII) tagging. The UII machine readable markings are being implemented to eliminate human errors in asset identification while being handled in maintenance or supply operations. All NWRM packaging requires the application of Radio Frequency Identification (RFID) tags. The RFID technology enables the verification of inventory and tracking of movements of assets across the AF through the use of hand scanners and static portals. (A4)

Currently the DOD uses the Defense Integration and Management of Nuclear Data Services (DIAMONDS) application to track nuclear munitions. Another area being examined for process improvement via technology insertion is nuclear weapon and Nuclear Weapon Related Materiel (NWRM) inventory tracking. This involves combining a suite of technologies and applications on a biometrically secure handheld computing device to enable the real-time tracking of nuclear warheads and nuclear bombs across all USAF installations. This is expected to significantly support the Air Force's efforts to reinvigorate the Nuclear Surety Mission.

We are also implementing under the PIC program a commercial off-the-shelf product lifecycle management (PLM) information technology to improve ICBM problem reporting and engineering change management processes. This capability will be implemented through spiral releases ultimately providing a modern and secure management capability for critical ICBM configuration management and nuclear data.

Mr. TURNER. Though there appears to be robust reporting processes in place to minimize risk during the movement of nuclear weapons, what technologies are currently being considered, developed, or prototyped in increase 'positive accountability' of warheads? What steps are being taken to minimize the time required to positively account for each and every warhead and report status up the chain-of-command?

General THOMAS. The Air Force Nuclear Weapons Center (AFNWC) established its Sustainment and Integration Center (STIC) to track the kind, condition, count and location of all Air Force nuclear weapons and nuclear weapons related material (NWRM). The STIC is a 24/7/365 center to track and monitor Positive Inventory Control of nuclear weapons and NWRM. The STIC also facilitates communication

with key DOD and DOE command centers and provides capabilities to support effective crisis management corrective action responses.

There are several technologies being considered for positive accountability. This includes efforts ranging from "Commander's Dashboards" to biometrically handheld scanners. The AFNWC works with Air Force Global Strike Command (AFGSC), Defense Threat Reduction Agency, Department of Energy, and Air Force Safety Center to determine feasibility of new technologies based on current Concept of Operations to ensure all operational conditions are considered prior to pursuing new technologies.

The Center is continually assessing technology in the area of nuclear surety and asset tracking. When technology has demonstrated a mature enough Technology Readiness Level or becomes commercially available, it will be evaluated in terms of its ability to meet the validated needs of AFGSC and the needs of the other members of the Nuclear Enterprise.

