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[H.A.S.C. No. 114–51]

USAF BOMBER FORCE STRUCTURE—CURRENT REQUIREMENTS AND FUTURE VISION

HEARING

BEFORE THE

SUBCOMMITTEE ON SEAPOWER AND PROJECTION FORCES

OF THE

COMMITTEE ON ARMED SERVICES
HOUSE OF REPRESENTATIVES

ONE HUNDRED FOURTEENTH CONGRESS

FIRST SESSION

HEARING HELD
SEPTEMBER 29, 2015

U.S. GOVERNMENT PUBLISHING OFFICE
97–193 WASHINGTON : 2016

For sale by the Superintendent of Documents, U.S. Government Publishing Office
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USAF BOMBER FORCE STRUCTURE—CURRENT REQUIREMENTS AND FUTURE VISION

HOUSE OF REPRESENTATIVES,
COMMITTEE ON ARMED SERVICES,
SUBCOMMITTEE ON SEAPOWER AND PROJECTION FORCES,
Washington, DC, Tuesday, September 29, 2015.

The subcommittee met, pursuant to call, at 3:30 p.m., in room 2118, Rayburn House Office Building, Hon. J. Randy Forbes (chairman of the subcommittee) presiding.

OPENING STATEMENT OF HON. J. RANDY FORBES, A REPRESENTATIVE FROM VIRGINIA, CHAIRMAN, SUBCOMMITTEE ON SEAPOWER AND PROJECTION FORCES

Mr. FORBES. Good afternoon. And today the subcommittee is going to meet to discuss the future of Air Force long-range strike—current requirements and future vision. We thank you all for being here.

We know that we are going to have some votes that are going to come up relatively soon, so Mr. Courtney and I have both agreed that we are going to submit our opening statements for the record to save that amount of time and go right to our testimony from our witnesses.

So let me thank you, all three, for being here and all of your staff for the hard work that they continually do.

Before we start, I need to just get a motion on the record. I ask unanimous consent that non-subcommittee members be allowed to participate in today's hearing after all subcommittee members have had an opportunity to ask questions. Is there an objection?

Seeing none, the members will be recognized at the appropriate time for 5 minutes, the non-subcommittee members.

And, with that, we are delighted to have with us General Robin Rand, the Commander of the Air Force Global Strike Command; Lieutenant General Arnold W. Bunch, Jr., the Military Deputy to the Assistant Secretary of the Air Force for Acquisition; and Mr. Randall G. Walden, Director of the Air Force Rapid Capabilities Office.

So, gentlemen, thank you all for being here.

Mr. Courtney, do you have any comments you would like to make?

Mr. Courtney says no.

So, with that, General, are you going to start off, or how are we going to proceed?

General RAND. Sir, that is great. I would be happy to.

Mr. FORBES. Okay. Then we thank you, and the floor is yours.

[The prepared statements of Mr. Forbes and Mr. Courtney can be found in the Appendix beginning on page 23.]

STATEMENT OF GEN ROBIN RAND, USAF, COMMANDER, AIR FORCE GLOBAL STRIKE COMMAND

General RAND. Thank you.

Chairman Forbes, Ranking Member Courtney, distinguished members of the committee, thank you very much for allowing me to appear before you to represent the men and women of Air Force Global Strike Command.

First, let me say that our airmen of the Air Force Global Strike Command are doing a fantastic job providing effective nuclear and conventional global strike forces for our combatant commanders and our Nation. A key to our success will be our ability to modernize, sustain, and recapitalize our bomber forces.

In addition to our ICBM [intercontinental ballistic missile] forces, Air Force Global Strike is currently responsible for the B–52 and the B–2 bombers. As you know, the B–52 serves as the Nation's most versatile and diverse weapons system in the command by providing precise and timely long-range strike capabilities. Meanwhile, the B–2 can penetrate an adversary's most advanced integrated air defense system to strike heavily defended targets.

And I am happy to report that in 2 days Air Force Global Strike Command will assume responsibility for the B–1 Lancer mission and the airmen who operate, maintain, and support this proven warhorse. The B–1s have been actively engaged in the Southwest Asia theater, flying over 14,000 combat missions since September 11, 2001. We look forward to incorporating this important platform in the Air Force Global Strike Command so we can learn from their recent experience and share best practices across our forces.

However, modernization and sustainment can take us only so far, so we look forward. And with the LRS–B [Long-Range Strike Bomber], that future looks promising. The LRS–B will extend American air dominance against next-generation capabilities in an anti-access environment by its long range, significant payload, and survivability.

Mr. Chairman, I want to thank you again for the opportunity to appear before the committee to discuss Air Force Global Strike Command and our bomber force structure. And I look forward to your questions.

And, sir, with your permission, I would like to have my written testimony entered into the record.

[The prepared statement of General Rand can be found in the Appendix on page 27.]

Mr. FORBES. Without objection, all of the written testimony of our witnesses will be made part of the record today.

So thank you, General, and——

General RAND. Yes, sir. Thank you.

Mr. FORBES [continuing]. Thank you for your service to our country.

General Bunch.

STATEMENT OF LT GEN ARNOLD W. BUNCH, USAF, MILITARY DEPUTY, OFFICE OF THE ASSISTANT SECRETARY OF THE AIR FORCE FOR ACQUISITION, U.S. AIR FORCE

General BUNCH. Mr. Chairman, Ranking Member Courtney, and the rest of the distinguished ladies and gentlemen of the committee, thank you for this opportunity. And thank you for your support of the United States Air Force, and thank you for your service. We look forward to discussing with this subcommittee the modernization of the current bomber fleet and our efforts to bring the Long-Range Strike Bomber into our Air Force inventory.

As I begin, because the Long-Range Strike Bomber is a classified program and is in source selection, there will be matters that we will not be able to discuss today. Source selection specifics, detailed design or capability information, and anything deemed classified or that could potentially jeopardize the integrity of the ongoing source selection will not be discussed. Thank you in advance for your understanding.

As the military deputy to the Air Force's service acquisition executive, I would like to highlight that the Long-Range Strike Bomber is the foundation of the Air Force's future long-range strike capability.

As we develop this advanced Long-Range Strike Bomber capability, we are and will continue to modernize the legacy bomber fleets—the B–1, the B–2, and B–52—to ensure they remain viable platforms, providing critical warfighting capabilities to the combatant commanders in support of the national military strategy far into the future. It is crucial that we continue the modernization of our current platforms until such time as we have sufficient numbers of Long-Range Strike Bomber aircraft in the inventory.

The Air Force has invested heavily in a number of advanced capabilities over the past 30 years as we have pushed to keep a technology advantage across the spectrum of conflict. We are capitalizing on those investments to enable the development and fielding of the Long-Range Strike Bomber to be executed with reasonable risk and at an affordable cost. In short, the Long-Range Strike Bomber program is leveraging our technological achievements and lessons learned to reduce risks and achieve affordability.

And when we discuss affordability, we are not simply focused on developing and procuring the Long-Range Strike Bomber. Our focus throughout the program has been on the lifecycle cost of the platform. It is not enough to simply acquire them; we must also be able to afford to operate and sustain them.

Additionally, we have built in an appropriate level of adaptability through design margin and open systems. The threat and the state of technology are not stationary. The steps we have taken to build in margin and open systems up front will allow us to address the evolving threat and embrace technological advancements.

As we establish the initial capability, we have, are, and will continue to carefully balance the art of the possible with the art of the practical. We are and will continue to keep a watchful eye towards the future and adapt the platform to meet emerging and evolving threats. This balance has been at the forefront of the program from the very beginning and remains a cornerstone of the strategy today.

The Long-Range Strike Bomber is crucial to our ability to execute the national military strategy in the future and ensure national command authorities have viable military options in the face of a technologically advanced adversary.

I would now like to turn this over to Mr. Randy Walden to speak about the Long-Range Strike Bomber program, given his perspective as the program executive officer.

Thank you, again, Mr. Chairman, for this opportunity to address you and the committee today, and I look forward to your questions.

[The joint prepared statement of General Bunch and Mr. Walden can be found in the Appendix on page 36.]

Mr. FORBES. General, thank you.

Mr. Walden, it is good to see you here, and thank you. The floor is yours.

STATEMENT OF RANDALL G. WALDEN, DIRECTOR, AIR FORCE RAPID CAPABILITIES OFFICE, OFFICE OF THE ADMINISTRATIVE ASSISTANT TO THE SECRETARY OF THE AIR FORCE

Mr. WALDEN. Thank you, sir. It is good to be back, and good to see you.

Mr. Chairman, Representative Courtney, and members of the subcommittee, I would like to thank you for the opportunity to address the subcommittee on the Long-Range Strike Bomber program, the future leg of the Air Force's long-range strike capability. As the program's executive officer, I would like to highlight some of the things the Air Force has done to ensure the success of the LRS–B program.

From the very start, we have had Secretary of Defense guidance on the fundamental capabilities required for the Nation, and our Chief of Staff continues to serve as the requirements owner.

Additionally, the program office and the user personnel have been working side by side in the same office since the very beginning of the program. This unique teaming has helped define the trade space and formed the right requirements for the program and capability. We drastically slashed the bureaucracy normally involved in getting a program to stable requirements—a key component in allowing us to snap the chalk line on the requirements early in the program planning.

From an acquisition oversight standpoint, the program is important enough to this Nation where the program manager and his team continue to work directly with Air Force and DOD [Department of Defense] acquisition senior leaders at the highest level to set and execute the program strategy from day one.

Overall, the LRS–B will provide a key capability to the joint fight. Often we start new programs and overreach when it comes to the number of new capabilities and, quote, "bleeding-edge technology" that must come together in development. Early on, we recognized that LRS–B is a part of a larger family of systems, and we put only mature capabilities on LRS–B as opposed to every-good-idea technology. In short, it does not have to be everything for everyone.

More succinctly, we have a family of systems in the joint arena that serves as the centerpiece for the joint warfighting capability. As such, we have crafted the LRS–B program strategy and capa-

bility to complement those capabilities while keeping affordability at the forefront.

Finally, the Long-Range Strike Bomber program will be built as a capability for today with an eye on tomorrow, both from a threat and evolving technology perspective. The Open Mission Systems [OMS] approach that General Bunch brought up not only introduces evolving capability with greater ease and lower integration cost, it serves as the catalyst for greater competition throughout the life of the LRS–B program. This, in turn, presents a greater value for our Air Force and our Nation.

It is an honor to serve alongside our great airmen and this great Nation. Thank you for the opportunity to be with you here today, and I look forward to addressing your questions. Thank you, sir.

[The joint prepared statement of Mr. Walden and General Bunch can be found in the Appendix on page 36.]

Mr. FORBES. Mr. Walden, thank you so much for being here.

And, General Rand, two questions for you, one a little more difficult than the other one. But the first one, I thought it would be good for our record if you could take just a moment and tell us what Global Strike Command does, you know, under your authority.

And then the second part of that is, according to the Quarterly Readiness Report—and we are going to have a slide up here in just a moment—bomber force aircraft availability is around 50 percent.

Can you explain to the committee what the contributing factors to this low level of readiness are and what your plan is to regain higher levels of readiness and when we can expect that?

[The slides referred to can be found in the Appendix beginning on page 51.]

General RAND. Yes, sir. Thank you.

The first thing, the Global Strike Command started in 2009, and it was an effort to, again, refocus our attention back on nuclear deterrence in the nuclear enterprise.

And so, when Strategic Air Command was put to rest back in 1990, we made a decision then to put our bombers in Air Combat Command; we put our missiles, our ICBM missiles, in Space Command; we put our air refueling tankers in Air Mobility Command.

And, in 2009, we brought back Air Force Global Strike Command. And we are responsible for the bombers now—I told you the B–1 has become part of that—so all our bombers, conventional and nuclear, Global Strike, and our ICBM, intercontinental ballistic missiles, are now in Global Strike Command. And so we work—our top priority is to support Admiral Haney and Strategic Command at Offutt and his priorities.

So I think that is a thumbnail sketch of what Global Strike Command does.

The other thing, sir, that I will tell you, our refocus is to help to, I think, reinvigorate the nuclear command and control communications that are an integral part of providing nuclear command and control for the President and our senior leaders. And Global Strike will be the lead for the Air Force on those systems that support nuclear command and control, and so that will be an increasingly top priority for this command.

The question you asked about aircraft availability, if I can make a distinction between aircraft availability and mission capable rate.

In aircraft availability, it is all the planes in a weapons system, whether they are on the flight line or they are in some type of depot status. And that is important to note. It is all the planes, those that are—the maintainers and the flyers have access to and those that are out of our pocket for whatever reason.

Mission capable rate is the planes that are on station that, actually, you have your availability to. And those rates are different. Our mission capable rates are decent and comparable with most of the other weapons systems that we have.

But aircraft availability, as you said, languishes a little bit. And part of the major reason for that is our relatively small fleet size that we have of our three bombers. Sir, we have 159 total bombers. Break that down to 76 B–52s, we have 63 B–1s, and we have 20 B–2s. At any time—and, oh, by the way, the newest of the three bombers is the B–2, and it is 25 years old.

So, at any time, there is going to be a number of your aircraft that are in heavy maintenance depot status. And when you take those away, and then you are doing modifications, a 50 percent aircraft available rate is what—you know, is the result of that small number. In the B–2 example, we have about 11 or 12 airplanes at any time that we really can have our hands on.

Some of the steps that we are taking, sir, to work this will be—long range will be the LRS–B, because that will help our numbers and we will have a larger number of airplanes. The other thing that we are working with is, some of these modernization and recapitalization efforts are directly looking to be more efficient and to address some of the challenges that we have with obsolete weapons systems platforms—the radar, the avionics. And by modernizing these, we are going to be able to have a much higher mean time between failures, if you will.

And so those are the steps that we are taking. And I am working those right now, and I will be able to address some of those later on, if you would like, in the hearing, what are some of the modernization efforts that are currently underway in all three platforms. And I have a laundry list of things that I can share with you, if you would like.

Mr. FORBES. General Bunch, the committee has been expecting an announcement on the new long-range strike aircraft for over 6 months. The delay already resulted in a $460 million reduction from the program in the fiscal year 2016 President's budget.

Can you explain the continued delay for the down-select announcement? And when can the committee expect reasonably that that decision is going to be made?

General BUNCH. Yes, sir. So this is a case, sir, where we need to go slow to go fast.

We have a fair, deliberate, disciplined, and impartial process anytime that we do a competition. And we have been transparent in working with industry and trying to get this thoroughly done and documented so that we can make that decision.

It is coming soon. That is about as good as I can give you. The way we are approaching this: it is not schedule-driven. It is fact-

and decision-point-driven based on the information we have and the review that we have of the proposals.

We are being very thorough. I am very proud of the team. I believe when this comes out it will be a very good news story for how our acquisition workforce has done this, despite the fact that it has taken us longer to get here.

And then, as the announcement approaches, sir, we will inform committee leadership just prior to when we make the announcement so everyone is aware.

Mr. FORBES. Do we have any idea whether that is going to be 2 months, 10 years? What do we think?

General BUNCH. Sir, my hope is it is within the next couple of months. But we have details that we still have to work through to make sure we are doing it fair and make sure we are going through the process so that—we have to get the start right. If we get the start right, we set the program up for success the rest of the way. That is the part we are so focused on, is trying to get that right, right now, sir.

Mr. FORBES. Okay.

Mr. Walden, one more question I need to get on the record. The Air Force misstated the 10-year cost for research, procurement, and support of its long-range bomber in its annual report to Congress. Last year, the Air Force estimated the cost of the Long-Range Strike Bomber at $33.1 billion from fiscal year 2015 through fiscal year 2016. This year, it reported the fiscal year 2016 through fiscal year 2026 cost is $58.4 billion. Air Force stated both were incorrect and posited that $41.7 billion is the real number.

How confident are you that we have the cost in control for this platform now?

Mr. WALDEN. Sir, very confident. The program office has estimated over the handful of years, and fiscal year 2015 was the start of that. And that program office estimate was at $41.4 billion, and fiscal year 2016 was at $41.7 billion. So the overall cost estimating of the program has been very stable, and I am very confident in the ability for us to do that estimating.

On top of that, we have been working closely with the non-advocate folks within the Air Force, as well as OSD [Office of Secretary of Defense], on doing independent cost estimates. And that is the foundation of that overall estimate.

For the air portion, General Bunch has been working closely with the Air Staff to get to the process and the air story, and he is probably best suited to answer that question.

General BUNCH. So, Mr. Chairman, that is a regrettable error, that we submitted inaccurate information to Congress in a report. We take that very seriously. We know the importance of providing decision makers accurate information.

And, as a result of that, Secretary James ordered a review of the process that we have within the Air Force and to do a thorough review of our processes and how those databases and how those information were collected.

It was both a process and a human error. We have counseled the individuals who were involved in the creation of the report. We have put new business guidelines in place for how we use the databases and how the program office estimates are rolled into those

databases for how business is done in the future and what we provide. And we have also established new processes to ensure that those numbers are reviewed by additional parties that have an interest in that to minimize the possibility that we will provide again inaccurate information.

And, again, a regrettable error, one that we are not happy about. We take it very seriously, and we understand the critical importance of providing the proper information to Congress.

Mr. FORBES. Thank you.

And, as we talked about earlier, they have called some votes at this particular point in time. We are going to have to take a recess in just a minute and come back.

But, Mr. Courtney, did you want to start some of your questions? Or would you rather wait and get them all in when we come back? Go ahead.

We will let Mr. Courtney begin——

Mr. COURTNEY. Great.

Mr. FORBES [continuing]. And then we will take a recess and come back afterwards.

Mr. COURTNEY. So thank you to the witnesses for being here and your outstanding testimony.

General Rand, you just mentioned briefly in your opening remarks the 14,000 missions that have been flown in Southwest Asia.

I was wondering, just for the sake of members who, you know, maybe aren't as familiar with the type of missions that the long-range bomber provides in terms of, you know, support for ground forces or whatever, what would be the harm or, you know, what impact would it be if we didn't have that capability and just had to rely on other fixed-wing types of planes that the Air Force flies?

Because, obviously, there is a big investment we are looking at here, and I think it is important to establish, you know, what is the value here——

General RAND. Yes, sir.

Mr. COURTNEY [continuing]. That we are really talking about, very specifically.

General RAND. Absolutely.

The three bombers, as you mentioned, two of the three are nuclear- and conventional-capable. The B–1 is conventional only. But, in general, the purpose of long-range strike with a bomber is to be able to hold any target in the planet at risk, not in weeks or months, but in hours. And that is the beauty of what a long-range bomber can do.

We don't have to be as concerned with some of the basing options that you would have to be. We can go a long way with a decent payload, and we can—and hold targets at risk. We also are recallable. We also are flexible in their surge capability.

So long-range strike gives combatant commanders and our senior leaders in this Nation great flexibility to make sure that we are able to, when necessary, deter and, equally important, to assure many of our partner nations that we are there with them.

Some recent examples, if I may, sir. The B–1s right now are fighting and have been fighting over the skies of Afghanistan, Iraq, and Syria for the last 12, 13 years, nonstop, 24/7, doing a remarkable job at a low threat, not much of an anti-access environment,

and working very closely with our Army, Navy, Marines, and the airmen on the ground who are engaged in ground combat. And they have done that very successfully.

They also have the capability to go long ranges. And a recent example of that was March of 2011 when they took off from Ellsworth in a driving snowstorm and flew nonstop to Libya and were able to do some very, very serious damage to the Libyan regime at the time; as well as exactly what the B–2s did in 2011 against Qadhafi.

Most recently, in North Korea, when there was a flare-up back in August, we had our six B–52s that have been on a continuous bomber presence at Guam for the last decade nonstop. And we were in the middle of a swap-out; six were going in to replace the six that were there. And the PACOM [Pacific Command] commander immediately contacted the Joint Staff and Air Force Global Strike and said, "Could we leave those six additional B–52s longer? We really like the presence."

In addition, the B–52s and B–2s two years ago flew a nonstop trip from their bases to the Republic of Korea, released training ordnances on one of the ranges, and flew back nonstop.

I think that gives a perspective on how we can hold enemies at risk in, again, hours versus weeks. Did I answer your question?

Mr. COURTNEY. Yes. Thank you.

General RAND. Thank you, sir.

Mr. FORBES. Members, we are going to take a recess till after the votes. We will come back, we will pick up with Mr. Courtney's questions, and then move on to the other questions we have.

Gentlemen, again, we apologize, but thank you for your patience.

And, with that, we stand in recess.

[Recess.]

Mr. FORBES. We thank you for your patience in allowing us to get through those votes.

And when we left, Mr. Courtney was in the process of asking some of his questions, so we yield the floor once again to Mr. Courtney for any questions he might have.

Mr. COURTNEY. Thank you, Mr. Chairman.

And thank you, General, for your answers.

And so one other question. Our subcommittee actually has been dealing a lot with the Air National Guard modernization in terms of trying to comply with the 2020 international, you know, flight restrictions that are going into effect. And I was just sort of wondering if you could talk about that, whether that is an issue. I mean, obviously, these are old planes which long predate some of these new rules going into effect.

And is that something that you have already started to change, in terms of the avionics? Or is that something that, sort of, is still out there in the future?

General BUNCH. So, sir, I will take the first stab at that.

I think one of the ones you are talking about there is the 130 modernization, C–130 modernization, and the AMP [Avionics Modernization Program] program.

And where we are at on the AMP program is that we have reinvigorated and revived it. We have built a roadmap ahead that is funded through the Air Force, through the FYDP [Future Years

Defense Program]. It is focused on three main areas. The first area is focused on safety. The second—and obsolescence. The second area is focused on compliance with those mandates that you have talked about. And the last of those is focused on modernization.

The program that we have laid out, the Guard, Reserve, and the Active are all on board. And we have a program that——

Mr. COURTNEY. And I apologize. So I guess my question is, is this something that the bomber fleet has to deal with, as well?

General BUNCH. There are certain things that we have to look at in a roadmap for what we do with our IFF, information friend or foe, activities. Those are all laid in to what we are looking at for the plan, sir. We don't see a roadblock there for what we are trying to do.

Mr. COURTNEY. Thank you.

Mr. FORBES. The gentlelady from Missouri is recognized for 5 minutes.

Mrs. HARTZLER. Thank you, Mr. Chairman.

And thank you, gentlemen.

And it was so nice to meet you, General Rand, the other night at the Evening Tattoo, the celebration of the birthday of the Air Force. I highly recommend that to any member of HASC [House Armed Services Committee] and certainly was very proud to get to be a part of that and proud of the Air Force. And, of course, we are so proud of what is going on in Whiteman [Air Force Base] and appreciate your support of that.

Just wanted to—you were talking about parts sustainability. And this has been, of course, a huge issue ever since I have been in office with the B–2, with only having 20. And I know that there have been many gains made in that, but we still have a ways to go there.

And this is just, kind of, outside the box. I was reading in your testimony about the difficulty in trying to keep manufacturers and others interested in carrying out those contracts. I was just reading last week, being a part of this subcommittee, some information the chairman and others provided about the Navy and how they are integrating 3D parts building in their naval vessels to help address some of their things.

I recently toured the National Security Campus in Kansas City. That is a pretty amazing place. And they were showing me the 3D parts development and manufacturing that they are doing there and how it is producing lighter, cheaper, faster parts.

So I was just wondering, are you aware if this has been tried any in the B–2, as we look at manufacturers that are dropping out from being willing to—you know, maybe having our own production in certain parts?

General BUNCH. So, ma'am, I will—we are looking and the Air Force Sustainment Center does look at adaptive manufacturing or 3D manufacturing, and we have not found a lot of applicability to what we are trying to do——

Mrs. HARTZLER. Okay.

General BUNCH [continuing]. At this particular moment.

You do raise a very good point that I think is important as we look at the Long-Range Strike Bomber. One of the issues we have had with the B–2 fleet is the small size of the fleet and trying to

get people to bid when you are trying to build parts for those things.

And I think we have come out and said we need 100 of the Long-Range Strike Bombers. That is the position that we bid on with. And as we have tried to do competitions to get people to bid on 20, it is often hard to do when manufacturing companies want to bid on hundreds or thousands.

We believe keeping the right Long-Range Strike Bomber fleet size will make that more easily competed and more sustainable in the longer term, ma'am.

Mrs. HARTZLER. Absolutely. And I support that. I think most of us understand the mistake that was made in dropping down those numbers to only 20. So I am hopeful we will be able to carry out those larger numbers.

Are there ever incentives paid to those companies, I mean, to get—you know, to stay in business, to keep those parts?

General BUNCH. We do those. Sometimes we will do life-of-aircraft buys. So we will go look at certain components, and we will figure out how many we think we will go through through the life of the platform. And we may even buy larger quantities and put them back on the shelf so that we can do it.

Another area that we are looking at in the B–2 to try to improve the parts flow is we are trying to bring some things in organic.

And the other one that we talked about earlier and we have referenced is the Open Mission Systems.

Mrs. HARTZLER. Right.

General BUNCH. As we move to more Open Mission Systems—and that is a focus area that we have across our inventory. As we move to the more Open Mission Systems, that will allow us, even at the some of those subcomponent levels, to be able to compete additional—more than we can today.

So we think there are some avenues we are doing where we try to do it organically within our workforce. We are also trying to open it up to more competition as we go to more Open Mission Systems. And sometimes, ma'am, we get to the point we have to do a life-of-the-platform buy. We estimate what the economic service life of the aircraft is, and we will buy the number of parts we think we will run through for the life of the program.

That is the efforts that we have, ma'am, on——

Mrs. HARTZLER. I appreciate you, General Bunch, for sharing that.

I want to switch gears real quickly, but, as you know, reportedly, China and Russia are developing new radars or defense systems that—other capabilities—to counter our stealthy aircraft. And, certainly, that is a concern.

So how do you see the Air Force maintaining this ability to penetrate A2/AD [anti-access/area denial] environments to perform long-range strike operations as anti-stealth technologies mature over time?

General BUNCH. So, ma'am, the adaptability that we built in, with the Open Mission Systems and the innovative design that we have envisioned and the requirements we put in place for the Long-Range Strike Bomber, we have the adaptability we need with the Open Mission System.

So if we run into it—and we realize the enemy is going to evolve, and they are going to try to get—they watch us, and they are adapting to address what we are trying to do.

So the Open Mission System allows us, as that changes, we can add in new capabilities that are not in the platform today, or we can replace the capabilities or the subsystems that we have in the aircraft today with more advanced ones to try to—to ensure—not try to—to ensure that we have the ability to address those future threats.

Mrs. HARTZLER. Great. Thank you.

I yield back.

Mr. FORBES. The gentlelady from Florida, Ms. Graham, is recognized for 5 minutes.

Ms. GRAHAM. Thank you, Mr. Chairman.

And thank you very much for being here today.

As we discuss and we have been discussing in quite a few hearings the challenges we face with our aging fleets, is there a way to possibly consider the weapons themselves and using technology to modernize the weapons systems that could potentially help with this challenge that we face?

General BUNCH. So, ma'am, we are looking at the longer term for what we are doing with our weapons inventories.

One of the programs that is in—not even officially—it is one we have talked about but it has not fully been formed as a program—is a long-range standoff weapon [LRSO]. That is to replace our air-launched cruise missiles. The air-launched cruise missiles were weapons systems that were bought and procured in the 1980s with a 10-year life expectancy that we have done service-life extension programs for multiple years. Now what we are focused on is how do we replace that, because we are not going to be able to extend them much longer. So we are initiating a program to allow us to be able to hold targets at risk in that manner.

That is one thing, but it is not fully capable of doing what we need the Long-Range Strike Bomber to do, which is to penetrate and hold all those targets at risk and give our national command authorities the flexibility to execute military options if needed.

Ms. GRAHAM. General Rand, did you have anything to add?

General RAND. Yes, ma'am. The LRSO is one example, but another would be on the B–52. It is carrying all the newest and latest and greatest weapons that we have now, and, in fact, it is currently undergoing an upgrade and modification to an internal weapons bay. It is called the 1760 Integrated Weapons Bay Upgrade. That is going to allow to carry internally our most modern weapons that we have—our JASSM [Joint Air-to-Surface Standoff Missile], our JDAM [Joint Direct Attack Munition]. That will help carry a larger payload and also reduce the drag from having it externally hanging on the airplane.

So those are some of the very things that we are modernizing. Even though it is a 60-year weapons frame, we are putting the best weapons that we have on it, and it is capable of carrying it.

Ms. GRAHAM. Well, thank you.

And I just want to thank all of you. And I am so proud to represent Tyndall Air Force Base and a small little piece of Eglin, as

well, in north Florida. And thank you very much for what you all do to serve our country.

And, Mr. Chairman, I yield back the balance of my time.

General RAND. You are welcome. Thank you.

Mr. FORBES. The gentlelady yields back the balance of her time.

The gentlelady from Hawaii is recognized for 5 minutes.

Ms. GABBARD. Thank you very much, Mr. Chairman.

I wonder if you can speak to how the LRS–B acquisition program, as you see it, differs from other programs that we have seen in the past that have experienced really massive cost overruns. And what have you learned from the past that will prevent that from occurring with this?

Mr. WALDEN. So two big things up front: one, stable requirements; and then the mature technology out there.

The most important thing now is to be able to integrate that technology that would be the highest risk to the overall program, and I think we have that pretty much under control.

The overall program's engineering and manufacturing development program would buy down that risk. For the past 4 years, we have been working closely with the offerors, contractors, and industry on buying down that risk and investing heavily and making sure that we are not putting any immature technology in there and adding more risk than we need or cost to the overall program.

General BUNCH. Ma'am, can I add to that just one item? I think there are a couple of other things that, through "Better Buying Power" and "Bending the Cost Curve," those are initiatives within the OSD and within the Air Force that plays into this. And one of those is our open and transparent relationship with our industry partners.

We have had a very open discussion with them about what the requirements are, how we were going to grade, what was going to be looked at in the source selection. And I believe that openness and sharing of information has allowed them to fully understand what we are trying to do, what risks we are willing to take, and has allowed them to give us ideas as to where we are taking risks and be a better informed buyer.

So I think that one is another one, ma'am, that sets us up a little differently on this one.

The other one that I would say is, as the technologies mature, we are structuring the contract so that we have incentives in place to keep the costs from going too high, to the point that we will limit the amount of profit if it goes too high.

And when we go into the production, one of the things we are doing different on this program that we have not done on other programs, we are going to get a firm, fixed price for production for the first five sets to get us up to one-fifth of the inventory. And we have not done that on any development program we have done in quite some time, where it is a brand new aircraft that is coming out. That is a strategy that we have done to ensure we lock in the prices and we make sure we have a firm way to control the costs as we go forward.

I think those are a couple of other things we have done a little differently on this program, ma'am.

Ms. GABBARD. Yeah.

You spoke of maturing technology, and I think one of the issues that is most often brought up when we look at not only our capabilities but the capabilities of those in the environments around us is the increasing A2/AD environments.

Can you speak to how you see these long-range strike operations developing and how they could be carried out in the future in order to penetrate those environments?

General RAND. Yes, ma'am.

The family of systems is what we refer to with the Long-Range Strike Bomber. And I would just—if you would look at what we currently have today in terms of electronic warfare, electronic attack, suppression of anti-air defenses, our way to combat, you know, cyber and communication concerns, I would think that, when we are fielding the LRS–B, those grandsons of what current systems we have today will be an integral part of the LRS–B.

And it will be a combined effort, so the LRS–B won't be going it alone. And that is the beauty of being able to parlay the technologies that we have and that we are already advancing in these families of systems that we have. And that is a very, very important part.

And then the weapons that the LRS–B will also carry, it is very incumbent that it has a standoff capability. And that is why I think when Mr. Walden talked about the long-range standoff, LRSO, why that is such an important part—or General Bunch did—why it is so important that we modernize and recapitalize on that capability.

Mr. WALDEN. Just to add to that, in the early days, I mentioned about the technology development. We did look at what the threat was doing, with an eye on the technology we would want to put on the platform not only in the near future but into the far future. General Bunch kind of touched on the ability first to try to modernize and keep up with the changing threat. That is what we are talking about.

Ms. GABBARD. Yeah.

Mr. WALDEN. So hopefully that helped.

Ms. GABBARD. Great. Thank you.

Thank you, Mr. Chairman. I yield back.

Mr. FORBES. That concludes all of our subcommittee members who had questions. And based on the motion we had at the beginning of the hearing, we now recognize Mr. Fleming for 5 minutes for any questions he might have.

Dr. FLEMING. Thank you, Mr. Chairman, for allowing me to sit in on subcommittee, even though you did make me sit at the kids' table. That is okay.

Mr. FORBES. We were putting you up front.

Dr. FLEMING. Oh, I see. I get that. I get that. Thanks.

Well, let's see, General Rand, great to see you. Welcome, again, to Barksdale Air Force Base, Bossier City-Shreveport, that is in my district. That is where we have the headquarters of Air Force Global Strike Command. And we are excited about having you, and you are going to be a great addition to our community.

I did have some questions for you regarding the Long-Range Strike Bomber. Regarding that mission, what are the factors that drive the total bomber requirement? And how many bombers will

the Air Force need to meet combatant commander needs once the LRS–B procurement is complete?

General RAND. Yes, sir. That is a fair question, and it is one that we haven't firmed up yet.

We currently have 159 bombers, of which 96 are combat-coded. I certainly can't imagine a situation where we could ever be less than that, in my humble opinion.

As we get the LRS–B in production and we procure them and start fielding them, that we will have to have a very healthy discussion of the requirements. What is the end state for then, they will be, the four bombers that we will have?

It would be premature to have that discussion right now, but I think that going in with the 100 as a requirement and knowing that several of the other bombers will be augmenting our LRS–B for quite a long time, our LRS–B for a significant time, we are going to be in that 159 range.

Dr. FLEMING. All right. Great. Thank you.

General RAND. Yes, sir.

Dr. FLEMING. Assuming a full LRS–B procurement of that 80 to 100 that you are referring to, can you discuss the value of B–52 modernization—specifically, re-engineering, new radar, beyond-line-of-sight communications, regional data link systems, et cetera?

General RAND. Absolutely, I can, sir. Thank you for that opportunity.

The B–52 still does things that are unique to that weapon system. It is the only system we have in our Air Force that do some of the things it does. And, as I mentioned earlier, it has the nuclear and conventional capability—very important to us. It has a long-range standoff capability—very important to us. It has an enormous payload, great range. The airplane is an amazing workhorse despite being 60 years old. So it is incumbent to me that we modernize and continue to modernize the B–52 because we are going to be relying on its service for many years to come.

And some of the things we are doing as we speak are the Combat Network Communications Technology. That is going to really help the situational awareness of the aircrews, the ability to do a lot better management of how things are coming into the cockpit, moving map, machine-to-machine technology, if you will.

I mentioned already, earlier, about our 1760 Integrated Weapons Bay Upgrade. That is very important to us because we will be able to carry a larger payload, and we will be able to go farther because we will reduce the drag by not having the external weapons on board.

Dr. FLEMING. Right.

General RAND. I am very interested, and I am going to work with my counterparts here and certainly the Air Staff to have good discussions in procuring Link 16 for the B–52. It is currently the only combat airplane that we don't have that is on the network of Link 16. And that is really important for other—Navy, our joint partners, and our Air Force to be able to see where the B–52s are and for them to see where other assets are.

I mentioned earlier to you, sir, the importance that I think—we have a 1980s radar that still has 1960s technology that we are using. And as we address the A2/AD environment, radar is still

very important to be able to, that last place where we are at, to give that last guidance to the weapons. And so I would like to do what we can to procure a new radar.

And, finally, I would like to have some good discussions with the Air Staff on the possibility of re-engining the B–52 to reduce the fuel requirements efficiency, increase our range—we can go higher, we can go farther—reduce the tanker requirements. There are many benefits of a possible re-engining. But that would be premature. It also has a considerable——

Dr. FLEMING. Right.

General RAND [continuing]. Cost that goes with it.

Dr. FLEMING. So it is going to be a good while before we get the Long-Range Strike Bomber off the assembly line. There are a lot of opportunities to enhance and improve what we already have in our fleet and our inventory, to kind of bridge that gap.

General RAND. Sir, you are spot-on; 2025 was what we are hopeful for IOC, the initial operation capability, of LRS–B. It will take several years to procure whatever buy we end up with. We are easily talking, the B–52, into the 2040s is, I think, a more than viable platform for us.

So any moneys that we invest today, we will get our return on this. This won't be something that we won't be using in 5 years from now.

Dr. FLEMING. Right. Thank you.

And I——

General BUNCH. Can I add?

Dr. FLEMING. If the chairman will allow——

General BUNCH. We need to do that. We talked about the B–52. We also need to do that on the B–1 and the B–2. We have to keep all of those relevant so that we have our options open as we get beyond and we get the Long-Range Strike Bomber on board so that we can decide how we need to shape our force to face that challenge that may be out there in the future.

General RAND. And that is a great point. Right now, in all three bombers, there are fiscal year 2016 dollars that we are aggressively using to make modifications and modernization on every one of our platforms. And I would be happy to share the B–1 and the B–2 initiatives we have, as well.

Dr. FLEMING. Great. Great. Thank you.

And I yield.

Mr. FORBES. Thank you, Mr. Fleming.

And as we said at the outset, also, we want to give you any opportunity you need to take a few minutes. If there is something that we didn't include in the transcript that you think is important to get in there or something that was mischaracterized or you might want to change now, this is your time to do it.

And we will start with you, General Rand.

General RAND. Sir, I will just foot-stomp what I said earlier. I think it is incumbent upon us to realize that the long-range strike capability is something that our Nation absolutely has to have. To do that, we have to be able to modernize our current bomber fleet and we have to acquire a new LRS–B, and I think we are on the path to doing that.

I think it is critical that we are able to hold our enemies at bay and keep them at risk anywhere at any time. And I appreciate the support that you are providing us to be able to, one, advocate and, two, endorse, and be our cheerleaders as we go down this road. Because while some of these bombers are mature, they are very capable, and our Nation needs them.

So thank you.

Mr. FORBES. General, thank you.

General Bunch.

General BUNCH. Sir, I just want to talk one more moment about the section 1047 error that we, the Air Force, made as we submitted our report. Again, that is a regrettable error, and we understand fully the importance of providing accurate information to Congress.

I want to stress to everybody that the program office estimates had absolutely and—nothing with the Long-Range Strike Bomber had anything to do with that error. The error was a process and a human error. Secretary James took it very seriously, and we have counseled the individuals, and we have changed our processes to minimize it.

I just want to make sure we characterize it had nothing to do with what the LRS–B program office had done. They provided all the information, and it was internal to the Air Staff that the error occurred.

I want to follow along with General Rand and stress that the Long-Range Strike Bomber is crucial to the Air Force's ability to execute the national military strategy in the future, and particularly in an anti-access/area denial role. We need this capability in the field so that we can continue to give the national command authorities options to prosecute targets and continue to serve as a world power and execute our mission.

Thank you, sir.

Mr. FORBES. General, thank you.

And, Mr. Walden, we will give you cleanup.

Mr. WALDEN. Yes, sir. Thanks.

One, I think the team, the LRS–B team, has worked very hard to get to where we are today. We believe we are ready to execute the program. The source selection is almost over. We are ready to make that down-select and move on with building the next-generation bomber, a Long-Range Strike Bomber, for the Nation.

So we look forward to working with you in the future. Thank you, sir.

Mr. FORBES. Thank you.

And, once again, as we said at the outset, we just appreciate all three of you being here, but also all of your staffs. We know how hard your staffs work to get you the information and to help you do what you do. And to all the men and women who serve under you, we thank you for their efforts.

And, with that, Ms. Graham, if you have nothing else, then we are adjourned.

[Whereupon, at 4:56 p.m., the subcommittee was adjourned.]

A P P E N D I X

SEPTEMBER 29, 2015

PREPARED STATEMENTS SUBMITTED FOR THE RECORD

SEPTEMBER 29, 2015

Opening Remarks of the Honorable J. Randy Forbes,
Chairman of the Seapower and Projection Forces Subcommittee,
for the hearing on
USAF Bomber Force Structure—Current Requirements and Future Vision
September 29, 2015

Today the subcommittee meets to discuss the future of Air Force long-range strike—current requirements and future vision.

Our distinguished panel of guests testifying today includes:

- Gen Robin Rand, Commander, Air Force Global Strike Command;
- Lt Gen Arnold W. Bunch Jr., Military Deputy, to the Assistant Secretary of the Air Force for Acquisition; and
- Mr. Randall G. Walden, Director, Air Force Rapid Capabilities Office.

Distinguished guests, thank you for being with us today.

Earlier this month, our committee met with an outside panel of witnesses to discuss the future of Air Force Long Range Strike capabilities and employment concepts. Today, the subcommittee plans to continue this effort and to better understand the Air Force's perspective on the future of Long Range Strike.

Long-range bomber aircraft have been a central element of America's power projection forces since the Second World War. But after several decades of relative neglect, the Air Force's bomber fleet is now the smallest and oldest it has ever been. Overall, our 159 bombers have an average age of 39 years—older than most of their pilots—and less than half of the force is "mission capable" in at least one mission area.

The readiness level of our bomber fleet is disconcerting. Of these aircraft, only 20 B-2s are "stealth bombers" capable of penetrating the integrated air defense systems being fielded (and exported abroad) by countries like Russia and China. Our 139 older B-1 and B-52 bombers are best suited for operating in low-threat environments and launching standoff missile strikes. While newer multi-role fighters like the F-22 and F-35 may be able to penetrate modern defenses, they lack the range, endurance, and payload needed to operate from bases outside the range of enemy missiles and hold at risk the larger and more challenging target sets our military is likely to face in the future.

As a result, the United States has a serious shortfall in long-range penetrating strike capability and capacity that affects our security in several important ways. First, by limiting our ability to respond promptly to aggression and hold at risk high-value targets (such as enemy leaders or weapons of mass destruction) inside defended airspace, it emboldens our strategic competitors and undermines deterrence. Second, it undermines the confidence of our allies and partners that we

can respond rapidly and decisively if and when they are attacked. Third, it forces short-range U.S. air forces to operate from bases within the range of enemy missiles and other threats, playing to the strengths of our competitors' anti-access strategies and imposing upon the United States the high costs of countering them. For all of these reasons, I believe it is imperative that we expeditiously acquire the new Long Range Strike aircraft.

As to our hearing, I look forward to discussing the Air Force's ability to provide a ready force now and to maintain and transition the current force to a new LRS-B centered force in the 2040 timeframe. Additionally, the committee has concerns about the ability of the Air Force to manage program costs given Tony Capaccio's recent Bloomberg article that brought to light a 10-year cost estimate error running in the multiple billions of dollars between FY15 and FY16. Finally, I am concerned about the continued delay in the LRS-B award that in my estimation is costing the USAF approximately $100 million a month and will undoubtedly result in reduced LRS-B FY16 authorizations and appropriations.

Once again I want to thank our witness for participating in our hearing this afternoon and I look forward to discussing this important topic.

With that, I turn to my good friend and colleague, the ranking member of the subcommittee, Joe Courtney.

Opening Remarks for Congressman Joe Courtney
Ranking Member
Seapower and Projection Forces Subcommittee
USAF Bomber Force Structure – Current Requirements and Future Vision
September 29, 2015

Mr. Chairman, thank you for holding this hearing. This is our subcommittee's second opportunity this month to discuss the importance of our nation's long range strike capabilities, as well as our current and future bomber fleet.

The need for a modern and effective bomber fleet is clear. The Air Force bomber fleet has long provided our nation with a flexible and effective deterrent tool. It delivers a full complement of conventional long range strike options for decision makers and composes one of the three legs of our strategic deterrent triad. Our nation's ability to project power and convincingly strike from far distances is a fundamental cornerstone of our warfighting ability – both at the tactical level and the strategic level. As our near-peer competitors develop formidable anti-access and area denial technologies, maintaining our military advantage hinges on our ability to penetrate those defenses.

That is why the development of the Long Range Strike Bomber, or LRS-B, is integral to defeating those A2/AD challenges, and to advancing our nation's power projection abilities. I strongly support the LRS-B program, and Congress must do all it can to ensure that it moves forward without delay. While our witnesses will be limited on what they can say about the program in this setting, I look forward to their testimony on the need for retaining our long range strike capabilities and the status of the program to date.

As we know, however, the LRS-B is not expected to be online until the late 2020s. Given this fact, it is essential that we continue to also invest in sustainment and modernization in our aging B-52s, B-1s and B-2s -- some of which are among the oldest aircraft in the fleet. I hope that our witnesses will provide greater insight into the Air Force's plan to ensure the availability, readiness and relevance of these legacy platforms in the decades ahead.

Looming above these critical priorities, unfortunately, are the dual threats of a continuing resolution and across the board sequestration cuts. While it appears that Congress may be able to prevent a government shutdown this week with a three-month CR, the lack of any certainty of what lays beyond its expiration -- let alone whether we will muster the will to resolve sequestration for any length of time -- is already inflicting the kind of destabilizing impact that our defense leaders have long warned us about.

For example, Deputy Secretary of Defense Bob Work recently indicated that the award of the LRS-B contract could be delayed until later this year or even next. The possibility of

delaying this needed strategic investment is deeply concerning to me, and I know many in this panel feel the same. But it is important to remember that this is not occurring in isolation – it is another example of the avoidable damage caused by the lack of bipartisan action on both short and long term budget challenges. I hope that our witnesses will clearly outline what the impacts of a CR and inaction on sequestration will be on the sustainment of our current fleet and the recapitalization of future capabilities.

Finally, I want to share with the witnesses my concern about recent reports of errors in the department's cost estimation for the LRS-B program. While all indications are that the discrepancies recently highlighted in the press were the result of human error, I want to emphasize to our witnesses the need for the public and Congress to have confidence in the data that the department is providing for this program. The department is asking for a sizable commitment of our nations fiscal resources, and it is important that we can fully rely on the information provided to justify that investment.

Mr. Chairman, thank you again for holding this hearing, and to our witnesses for being here to share their perspective and expertise with us today.

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HOUSE ARMED SERVICES COMMITTEE
SEAPOWER AND PROJECTION FORCES SUBCOMMITTEE
UNITED STATES SENATE

DEPARTMENT OF THE AIR FORCE

PRESENTATION TO THE HOUSE ARMED SERVICES COMMITTEE
SEAPOWER AND PROJECTION FORCES SUBCOMMITTEE
UNITED STATES HOUSE OF REPRESENTATIVES

SUBJECT: Bomber Force Structure – current requirements and future vision

STATEMENT OF: General Robin Rand, Commander
Air Force Global Strike Command

September 29, 2015

NOT FOR PUBLICATION UNTIL RELEASED BY
HOUSE ARMED SERVICES COMMITTEE
SEAPOWER AND PROJECTION FORCES SUBCOMMITTEE
UNITED STATES HOUSE OF REPRESENTATIVES

Introduction

Chairman Forbes, Ranking Member Courtney, and distinguished Members of the Committee; thank you for allowing me to represent the soon to be 31,000 Air Force Global Strike Command (AFGSC) Airmen. As this committee knows, potential adversarial Nations around the world are continuing to modernize and replace their weapons systems. Additionally, many are upgrading their integrated air defenses and are fielding other anti-access capabilities. Therefore, I would like to take a few minutes to briefly discuss our bomber force structure, as well as to highlight some critical modernization initiatives that are required for AFGSC to deter our potential adversaries and assure our valued allies.

Air Force Global Strike Command Forces

As you know, the command was created to provide a focus on the stewardship and operation of two legs of our nation's nuclear triad while also accomplishing the conventional global strike mission. Due to the special trust and confidence the American people put in us every day, we can never fail them in ensuring a safe, secure, and effective nuclear arsenal.

In addition to the Intercontinental Ballistic Missile mission, AFGSC is responsible for the B-52H Stratofortress (B-52) and B-2A Spirit (B-2) bombers. This includes maintaining the operational readiness of both the bombers' nuclear and conventional missions. The B-52 serves as the nation's most versatile and diverse weapon system in Air Force Global Strike Command by providing precision and timely long range strike capabilities. Meanwhile, the B-2 can penetrate our adversaries' most advanced Integrated Air Defenses Systems to strike heavily defended targets.

Our flexible dual-capable bomber fleet is the most visible leg of the nuclear triad. They provide decision makers the ability to demonstrate resolve through generation, dispersal, or deployment, and the ability to quickly place bomber sorties on alert thereby ensuring their continued survival in support of the President and to meet combatant command requirements.

In two days, AFGSC will assume responsibility for the B-1B Lancer (B-1) mission and the Airmen who operate, maintain, and support this proven war horse. They provide a vital capability to combatant commanders and I look forward to providing them the support they need. Allow me a few minutes to highlight each bomber platform with you.

B-1

The B-1 is a highly versatile, multi-mission weapon system that carries the largest payload of both guided and unguided weapons in the Air Force inventory. It can rapidly deliver massive quantities of precision and non-precision weapons against any adversary, anywhere in the world, at any time. Our B-1 aircrews have been engaged in continuous combat operations; since September 11, 2001, they have flown over 14,000 combat missions.

The B-1's synthetic aperture radar is capable of tracking, targeting, and engaging moving vehicles as well as having self-targeting, terrain-following modes and air-to-air situational awareness. The SNIPER-SE pod provides additional capability to engage fixed or moving targets. In addition, an extremely accurate Global Positioning System-aided Inertial Navigation System enables aircrews to navigate without the aid of ground-based navigation aids as well as strike targets with a high level of precision. The Digital Communications Initiative (DCI) modification to the radios provides a secure beyond line of sight satellite connection into the Line of Sight (LOS) Link-16 network. In a time sensitive targeting environment, the aircrew can use targeting data from the Combined Air Operations Center over DCI, then strike emerging targets rapidly and efficiently. This capability was effectively demonstrated during operations Enduring Freedom and Iraqi Freedom.

We will need the B-1 for many more years and future avionics and weapon upgrades are critical for it to remain a viable Combatant Commander tool. The Integrated Battle Station (IBS)/Software Block-16 (SB-16) upgrade, the largest ever B-1 modification, includes an upgraded Central Integrated Test System (CITS), Fully Integrated Data Link (FIDL), Vertical Situation Display Upgrade (VSDU), and a simulator upgrade. This marks a fantastic capability upgrade and the associated cockpit upgrades providing the crew with a much more flexible, integrated cockpit. This will allow the B-1 to operate in the fast-paced integrated battlefield of the future.

B-52

The B-52 may be the most universally recognized symbol of American airpower…its contributions to our national security through the Cold War, Vietnam, Desert Storm, Allied Force, Iraqi Freedom and Enduring Freedom are well documented. Our Airmen have worked tirelessly to keep the venerable B-52 in the air. The B-52 is able to deliver the widest variety of nuclear and conventional weapons. This past year, we maintained complete coverage of our

Nuclear Deterrence Operations requirements while supporting our overseas Continuous Bomber Presence (CBP) for Pacific Command.

I anticipate the B-52 will remain a key element of our bomber force beyond 2040; it is paramount we invest resources into this aircraft now to keep it viable in both conventional and nuclear mission areas for the next 30 years. Our B-52s are still using 1960s radar technology and the last major radar upgrade was done in the early 1980s. Currently, the meantime to fail rate on the B-52 radar is 46 hours. The current radar on the B-52 will be even less effective in the future threat environment, and without an improved radar system on the B-52, there will be increased degradation in mission effectiveness. Hence, we are conducting the study phase of the B-52 Radar Modernization Program, that I believe is vitally important in ensuring the B-52 remains viable through 2040 at a minimum.

In addition, the B-52 is the only aircraft in the USAF combat Air Forces that is not Link 16 capable. Hence denying our ability to integrate and communicate with other CAF assets. Finally, AFGSC will work closely with SAF/AQ and Dr. Bill Laplante's team to look at the affordability of "re-engining" our B-52s in order to reduce fuel consumption, fly higher and farther, and reduce air-to-air refueling requirements.

B-2

For 20 years, the B-2 has defended America as our most modern strategic deterrent. In each of our nation's last four armed conflicts, the B-2 has led the way in combat. The B-2 is able to penetrate heavily defended enemy defenses and deliver a wide variety of nuclear and conventional weapons due to its long-range and stealth capability.

We will preserve and improve the B-2's capability to penetrate hostile airspace and hold any target at risk without subjecting the crew and aircraft to undetected threats. To do this, we secured JROC validation of the Defensive Management System-Modernization (DMS-M) Capabilities Development Document, which will allow the program to enter into the Engineering and Manufacturing Development phase to acquire a new system. This upgrade provides the B-2 aircrew with improved threat situational awareness and increased survivability by replacing the current DMS Threat Emitter Locator System and display system with modernized and sustainable systems capable of addressing advanced threats. This program will keep the B-2 viable in future anti-access environments. We also continue work on the Common Very Low Frequency Receiver (CVR) to permit aircrews to better receive strategic communication

messages and the B-2 Flexible Strike Phase 1 that will allow for future weapon capability upgrades.

AFGSC continues to evolve B-2 conventional combat capability by fielding vital programs such as the Massive Ordnance Penetrator (MOP). Successful fielding of the 30,000-pound MOP bolstered our nation's ability to hold hardened, deeply buried targets at risk. Flight testing of the MOP completed successfully and AFGSC will become the lead command for MOP sustainment starting next fiscal year. We would like to thank Congress for your support on this critical program.

We are striving to maintain the proper balance of fleet sustainment efforts, testing, aircrew training, and combat readiness. The dynamics of a small fleet continue to challenge our sustainment efforts primarily due to vanishing vendors and diminishing sources of supply. Air Force Materiel Command is working to ensure timely parts availability; however, many manufacturers do not see a strong business case in supplying parts for a small aircraft fleet. Problems with a single part can have a significant readiness impact on a small fleet that lacks the flexibility of a large force to absorb parts shortages and logistics delays.

Long Range Strike Bomber (LRS-B)

The combat edge our bombers provide will be challenged by next generation air defenses and the proliferation of these advanced systems. The LRS-B program will extend American air dominance against next generation capabilities and advanced air defense environments. LRS-B's long range, significant payload, and survivability will provide operational flexibility for Combatant Commanders around the world. Additionally, its ability to penetrate air defenses while carrying a mixture of stand-off and direct-attack munitions make LRS-B a potent weapon in the Air Force's arsenal. It also continues the advantages our current bombers give us: flexibility and the ability to be relocated and recalled.

We continue to work closely with partners throughout the Air Force to develop the LRS-B and field a fleet of new dual-capable bombers; scheduled to become operational in the mid-2020s. The LRS-B will be a nuclear bomber; however, the platform will not be delayed for use in a conventional capacity while it undergoes final nuclear certification.

Air Launched Cruise Missile

Before I finish my opening remarks, allow me to mention three weapons that I will be very focused on for our bomber fleet. First, the AGM-86B Air Launched Cruise Missile (ALCM) is an air-to-ground, winged, subsonic nuclear missile delivered by the B-52. It was fielded in the 1980s and is well beyond its originally designed 10-year service life. To ensure the B-52 remains a credible part of the triad, the ALCM requires Service Life Extension Programs (SLEP). These SLEPs require ongoing support and attention to ensure the ALCM will remain viable through 2030. Despite its age, last year we successfully conducted six flight test evaluations, and we plan seven this year to fully comply with USSTRATCOM directives.

Long Range Stand-Off Missile

The LRSO is the replacement for the aging ALCM, which will have significant capability gaps beginning late this decade and worsening through the next. Replacement of the ALCM was identified by OSD in a 2007 Program Decision Memorandum and reiterated in the 2010 Nuclear Posture Review, the Airborne Strategic Deterrence Capability Based Assessment, and the Initial Capability Document. In a similar manner to LRS-B, the LRSO is necessary to ensure we maintain a credible deterrent in the future with the ability to strike at targets from beyond contested airspace in anti-access and area denial environments. The LRSO will be compatible with the B-52, B-2, and the LRS-B platforms. The LRSO Analysis of Alternatives (AoA) is complete and JROC approved, and in February 2014, the Chief of Staff of the Air Force signed the Draft Capabilities Development Document. LRSO was selected by SAF/AQ as a pilot program for "Bending the Cost Curve" and "Owning the Technical Baseline," which are new acquisition initiatives and is currently planned for reaching Milestone A next fiscal year. We fully intend to develop a conventional version of the LRSO as a future spiral to the nuclear variant.

B61

Finally, the B61-12 Life Extension Program (LEP) will result in a smaller stockpile, reduced special nuclear material in the inventory, and improved B61 surety. AFGSC is the lead command for the B61-12 Tail Kit Assembly program, which is needed to meet USSTRATCOM requirements on the B-2. The B61-12 Tail Kit Assembly program is in the Engineering and Manufacturing Development Phase 1 and is synchronized with NNSA efforts. The design and production processes are on schedule and within budget to meet the planned Fiscal Year 2020

First Production Unit date for the B61-12 Tail Kit Assembly, and support the lead time required for the March 2020 B61-12 all-up round. This joint Department of Defense and Department of Energy endeavor allows for continued attainment of our strategic requirements and regional commitments.

Conclusion

Thank you for your continued support of Air Force Global Strike Command and our nuclear deterrent and global strike missions. Fiscal constraints, while posing planning challenges, do not alter the national security landscape or the intent of competitors and adversaries, nor do they diminish the enduring value of long range, strategic forces to our nation. AFGSC will continue to seek innovative, cost-saving measures to ensure our weapon systems are operating as efficiently as possible. In closing, it is an honor to be a Wingman to the outstanding Airmen who make up Air Force Global Strike Command -- together we will continue to provide the deterrence and assurance the nation has come to expect of us.

General Robin Rand

Gen. Robin Rand is the Commander, Air Force Global Strike Command, Barksdale Air Force Base, La. He is responsible for organizing, training, equipping all U.S. intercontinental ballistic missile and bomber forces. The command's mission is to provide combat-ready forces for nuclear deterrence and global strike operations. The command comprises more than 23,000 professionals operating at six wings that control the nation's inventory of Minuteman III intercontinental ballistic missiles, B-2 and B-52 bomber aircraft.

General Rand was commissioned in 1979 after graduating from the U.S. Air Force Academy. He's had multiple flying tours; served as an air liaison officer with the U.S. Army; and has had staff tours on the Joint Staff, Office of the Secretary of Defense, and Air Staff. General Rand's previous commands include the 36th Fighter Squadron, USAF Weapons School, 8th Fighter Wing, 56th Fighter Wing, 332nd Air Expeditionary Wing at Balad Air Base, Iraq, 12th Air Force (Air Forces Southern), and prior to this assignment, Air Education and Training Command.

General Rand is a command pilot with more than 5,080 flying hours, including more than 470 combat hours.

EDUCATION

1979 Bachelor of Science degree in aviation science, U.S. Air Force Academy, Colorado Springs, Colo.
1983 Squadron Officer School, Maxwell AFB, Ala.
1986 Air Command and Staff College, by seminar
1988 Master of Science degree in aeronautical science, Embry-Riddle Aeronautical University, Fla.
1990 U.S. Air Force Fighter Weapons Instructor Course, Nellis AFB, Nev.
1998 Master of Arts degree in national security policy, Naval War College, Newport, R.I.
2010 Joint Flag Officer Warfighter Course, Maxwell AFB, Ala.
2012 Pinnacle Course, National Defense University, Fort Lesley J. McNair, Washington, D.C.

ASSIGNMENTS

1. July 1979 - July 1980, student pilot, undergraduate pilot training, Williams AFB, Ariz.
2. August 1980 - December 1980, T-37 pilot, pilot instructor training, Randolph AFB, Texas
3. January 1981 - May 1984, T-37 instructor pilot, 82nd Flying Training Wing, Williams AFB, Ariz.
4. May 1984 - July 1984, AT-38 pilot, fighter lead-in training, Holloman AFB, N.M.
5. August 1984 - January 1985, F-16 pilot, F-16 training, 63rd Tactical Fighter Squadron, MacDill AFB, Fla.
6. February 1985 - December 1986, F-16 pilot, 612th Tactical Fighter Squadron, Torrejon AB, Spain
7. December 1986 - June 1988, air liaison officer, 3rd Brigade, 1st Armor Division, Bamberg, West Germany
8. July 1988 - October 1988, F-16 pilot, F-16 training, 311th Tactical Fighter Squadron, Luke AFB, Ariz.
9. October 1988 - December 1989, F-16 flight examiner, 432nd Tactical Fighter Wing, Misawa AB, Japan
10. January 1990 - April 1990, F-16 pilot, USAF Fighter Weapons Instructor Course, Nellis AFB, Nev.
11. April 1990 - July 1992, F-16 weapons officer, 13th Fighter Squadron; and weapons and tactics flight commander, 432nd Operations Support Squadron, Misawa AB, Japan
12. August 1992 - September 1994, F-16 operations officer, USAF Weapons School, Nellis AFB, Nev.
13. September 1994 - July 1997, operations officer and Commander, 36th Fighter Squadron, Osan AB, South Korea
14. August 1997 - June 1998, student, Naval War College, Newport, R.I.
15. June 1998 - May 2000, policy planner, Directorate for Strategic Plans and Policy (J5), Joint Staff, the Pentagon, Washington, D.C.
16. May 2000 - March 2001, Deputy Commander, 56th Operations Group, Luke AFB, Ariz.
17. April 2001 - April 2003, Commandant, USAF Weapons School, Nellis AFB, Nev.
18. May 2003 - May 2004, Commander, 8th Fighter Wing, Kunsan AB, South Korea
19. June 2004 - June 2006, Commander, 56th Fighter Wing, Luke AFB, Ariz.

20. July 2006 - July 2007, Commander, 332nd Air Expeditionary Wing, Balad AB, Iraq
21. August 2007 - August 2009, Principal Director for Middle East Policy, Office of the Secretary of Defense, the Pentagon, Washington, D.C.
22. August 2009 - November 2011, Director, Legislative Liaison, Office of the Secretary of the Air Force; and Special Assistant to the Vice Chief of Staff, Headquarters Air Force, the Pentagon, Washington, D.C.
23. December 2011 - September 2013, Commander, 12th Air Force, Air Combat Command, and Commander, Air Forces Southern, U.S. Southern Command, Davis-Monthan AFB, Ariz.
24. October 2013 – Jul 2015, Commander, Air Education and Training Command, Joint Base San Antonio-Randolph.
25. Jul 2015 - present, Commander Air Force Global Strike Command, Barksdale AFB, La.

SUMMARY OF JOINT ASSIGNMENTS
1. June 1998 - May 2000, policy planner, Directorate for Strategic Plans and Policy (J5), Joint Staff, the Pentagon, Washington, D.C., as a lieutenant colonel
2. July 2006 - July 2007, Commander, 332nd Air Expeditionary Wing, Balad AB, Iraq, as a brigadier general
3. August 2007 - August 2009, Principal Director for Middle East Policy, Office of the Secretary of Defense, the Pentagon, Washington, D.C., as a brigadier general and major general
4. December 2011 - September 2013, Commander, Air Forces Southern, U.S. Southern Command, Davis-Monthan AFB, Ariz., as a lieutenant general

FLIGHT INFORMATION
Rating: Command pilot
Flight hours: more than 5,080
Aircraft flown: Primarily F-16

MAJOR AWARDS AND DECORATIONS
Distinguished Service Medal with oak leaf cluster
Defense Superior Service Medal
Legion of Merit with two oak leaf clusters
Bronze Star Medal
Air Medal with four oak leaf clusters
Korea Defense Service Medal
Iraq Campaign Medal with two bronze stars
Republic of Korea Order of National Security Merit (Samil Medal)
Colombian Air Force Cross of Aeronautical Merit (Grand Cross)
Brazilian Air Force Order of Aeronautical Merit (Grand Officer)

EFFECTIVE DATES OF PROMOTION
Second Lieutenant May 30, 1979
First Lieutenant May 30, 1981
Captain May 30, 1983
Major July 1, 1990
Lieutenant Colonel Feb. 1, 1995
Colonel Feb. 1, 2001
Brigadier General Jan. 1, 2006
Major General June 1, 2009
Lieutenant General Dec. 1, 2011
General Oct. 10, 2013

(Current as of July 2015)

DEPARTMENT OF THE AIR FORCE

PRESENTATION TO THE
HOUSE ARMED SERVICES COMMITEE
SUBCOMMITTEE ON SEAPOWER AND PROJECTION FORCES
U.S. HOUSE OF REPRESENTATIVES

SUBJECT: USAF Bomber Force Structure – Current Requirements and Future Vision

STATEMENT OF: ARNOLD W. BUNCH, JR., Lieutenant General, USAF
Military Deputy to the Assistant Secretary of the Air Force
(Acquisition)

Mr. Randall G. Walden
Director
Air Force Rapid Capabilities Office

September 29, 2015

Introduction

Long range bomber capability provides the President with options to hold targets at risk around the globe. As part of the airborne leg of the triad, the Long Range Strike Bomber (LRS-B) will provide a visible and flexible nuclear deterrent capability that will assure our allies and partners around the world. The Strategic Guidance for the 21st Century Defense reaffirmed the need for a new, survivable bomber capable of projecting power and deterring adversaries in anti-access and area denial environments. The LRS-B will provide our COCOMs critical operational flexibility across a wide range of military operations providing both conventional and nuclear capability in fulfillment of national objectives for years to come. In the near future, our legacy bombers will be increasingly challenged to operate in contested environments, and the Air Force must develop the LRS-B now to ensure we maintain the capability to counter emerging threats. As we develop this advanced LRS-B capability, we will continue to modernize the legacy bomber fleets—B-1, B-2 and B-52—to ensure they remain viable through 2040 as a key part of our National Military Strategy.

Long Range Strike Bomber

The LRS-B program is the Air Force's number one investment in research, development, test and evaluation (RDT&E). LRS-B is part of a family of systems (FoS) which includes delivery vehicles, missiles, ISR, electronic warfare, stealth and communication components. The FoS has the highest level of technology maturity of their type of programs to date. This aircraft will form the backbone of our future deterrence and strike capability and restore critical capabilities eroded by the proliferation of modern air defenses. LRS-B will achieve initial

operational capability (IOC) in the mid-2020s to provide conventional and nuclear strike capability with the capability of employing a wide mix of direct attack and stand-off weapons.

In February 2011, SECDEF directed streamlined acquisition of the LRS-B program and assigned it to the Air Force Rapid Capabilities Office. The program office has established a highly credible and stable program. We have performed extensive tradeoffs to establish disciplined requirements which had been in place since the May 2013 Joint Requirement Oversight Council (JROC) approval.

From the onset of the LRS-B program, we have set requirements at levels which provide the desired capability while minimizing development risk. This allows for the use of mature systems and technologies to help reduce development challenges experienced on past programs. Over the past three years the program office has worked closely with industry to ensure designs and requirements remain stable. We have completed Preliminary Design Reviews PDR and Manufacturing Readiness Reviews to establish a higher level of technology maturity than any new developmental aircraft program to date. Platform designs are now at the subsystem level: this provides substantial fidelity and confidence in the areas of overall structure, electronics, hydraulics, engines, air data systems and low-observable technology.

We take very seriously our responsibility of acquiring the right technology, capability and training for our Airman at an affordable cost. We have carefully balanced cost considerations across the life cycle— development, production and sustainment. This ensures that we can afford to acquire this critical capability and continue to operate and sustain the LRS-B fleet at the levels needed to support the National Military Strategy. The Average Procurement

Unit Cost (APUC) $550M, in base year 2010 dollars for 100 aircraft, defined the requirements and technology trades. This has been very important in balancing design with system cost. The stable requirements and mature platform design imbue cost confidence in the program.

Sustainment of this aircraft during its service life of 30+ years is a key element of the acquisition strategy. As such, the LRS-B is being designed to have an open architecture. The Air Force Open Mission Systems (OMS) standards enable open architecture, provide streamlined processes for systems integration, and will encourage competition. This enables us to more swiftly integrate new technology and future capabilities to respond to future threats across the full spectrum of operations. OMS sustains competition throughout the aircraft design and life cycle, and enables long-term affordability while enhancing supportability.

All of these elements offer greater confidence in development program outcomes and ensure the Air Force delivers critical system capabilities reliably and affordably. We recognize that significant integration work still lies ahead but are confident that we have the right talent, acquisition strategy, and budget realism to effectively and affordably bring LRS-B into the Air Force inventory.

The source selection for LRS-B is on-going and we expect a decision soon. Source selection is a deliberate process; we are executing our plan with discipline and rigor. The Air Force is committed to a fair, deliberate, disciplined, and impartial process in all of its competitive procurements. The contract, when awarded, will include the Engineering, Manufacturing and Development (EMD) of the LRS-B and its associated training and support systems through a cost reimbursable type contract with appropriate incentives to control cost. It also includes

fixed-price commitments from industry on the first five production lots. This represents approximately one-fifth of the 100 aircraft fleet which are typically the most expensive aircraft in the production phase of the program.

Until LRS-B is fielded, we continue modernizing our legacy bomber fleet in order to maintain the ability of our Air Force to accomplish the mission and provide Nuclear Deterrence Operations, Nuclear Response, Global Strike, and Global Precision Attack.

B-1

The B-1B is a long-range, air refuelable, multi-role bomber capable of flying intercontinental missions and penetrating enemy defenses with the largest payload of guided and unguided weapons in the Air Force inventory. The B-1B is the only bomber that has been continuously deployed since 2001, and it remains so today.

The Integrated Battle Station upgrade is the B-1B's largest modernization effort since its production and will provide enhanced situational awareness and precision engagement capabilities. The B-1B will complete this modernization effort in 2019. The first aircraft with this upgrade was completed in January 2014. To date, a total of ten aircraft have been modified. Five additional aircraft are planned for completion by December 2015.

Other efforts to update the navigation and radar systems are well underway and will complete in 2015. These efforts will improve reliability and maintainability of these critical systems. Additionally, OCO funding is included in the FY15 budget to provide a Service Life Extension Program (SLEP) for B-1 engines. This funding will replace parts that have been

degraded by nearly 15 years of combat and restore a portion of the B-1 engines to their original specifications. Finally, ongoing structural testing is validating the B-1B's structural integrity to ensure that it remains viable through its service life of 2040. Additional modernization efforts are envisioned to sustain the B-1B's proven-combat capability.

The B-1B is the Air Force threshold platform for early operational capability of the Long Range Anti-Ship Missile which is transitioning from a Defense Advanced Research Projects Administration (DARPA) demonstration to the Navy-led Offensive Anti-Surface Warfare Program. Integration of this weapon, coupled with the B-1B's long range, high speed and large payload, will posture the B-1B for an important role in 'Pivot to the Pacific' scenarios.

B-2

The B-2 is the only long-range strike aircraft capable of penetrating advanced Integrated Air Defense Systems to deliver weapons against heavily defended targets. Its unique attributes of intercontinental range, precision strike, large conventional or nuclear payloads, ability to penetrate defenses, and low observable profile allow it to prosecute Nuclear Deterrence Operations, Nuclear Response, Global Strike, and Global Precision Attack missions. The Air Force will continue to modernize the B-2 to ensure it remains effective and retains its unique set of capabilities as enemy defensive systems continue to advance. Current efforts to modernize the Defensive Management System will ensure the B-2 can continue to counter sophisticated air defense networks and operate in highly contested environments. The Air Force will, at the same time, continue development efforts to re-host the Stores Management Operational Flight Program software in the Flexible Strike program which will enable the B-2 to take advantage of advanced digital weapon interfaces such as those used by the B61-12. The Air Force will

continue efforts to field the Common Very-Low-Frequency (VLF) Receiver program to provide the B-2 with a VLF receiver for secure, survivable strategic communications capability. The Air Force will also continue fielding the Extremely High Frequency Satellite Communications and Computer Increment 1 program, a mid-life avionics upgrade to the flight management computers, and digital storage and data buses. In 2016, the Air Force will begin acquisition planning efforts for Strategic Communications to provide survivable two-way communications to the B-2. Finally, the Air Force will continue to pursue a number of B-2 sustainment initiatives to improve aircraft supportability and increase aircraft availability.

B-52

The B-52 Stratofortress is our nation's oldest and most versatile frontline long-range strategic bomber with the last airframe entering service in the Air Force in 1962. The Air Force continues to invest in modernization programs to keep the platform operationally relevant and updated with state-of-the-art capabilities. B-52 major modernization efforts include the Combat Network Communications Technology (CONECT) and 1760 Internal Weapons Bay Upgrade (IWBU) programs. CONECT provides an integrated communication and mission management system as well as a machine-to-machine interface for weapons retargeting for the entire fleet of 76 B-52Hs. To date, six aircraft have completed modification with two additional expected by December 2015. The digital infrastructure and architecture provided by CONECT is the backbone for the 1760 IWBU and future modification efforts. The 1760 IWBU provides internal J-series weapons capability through modification of Common Strategic Rotary Launchers (CSRLs). Both increments of this program are fully funded and, when complete, will significantly increase the B-52's capability to store and deliver the Joint Direct Attack Munition (JDAM); Laser-JDAM; Joint Air-to-Surface Standoff Missile (JASSM) and its extended range

variant; and the Miniature Air Launched Decoy (MALD) and its jamming variant. The Air Force is committed to modernization of the B-52 using modern technology to ensure the aircraft remains relevant through 2040 and beyond as an important element of our nation's defenses.

Conclusion

The Air Force remains committed to excellence and ensuring our global reach programs reflect the needs of our Nation. We will continue to modernize the legacy bomber fleets—B-1, B-2 and B-52 – as we develop the LRS-B capability. A key part of our National Military Strategy is to ensure that the current legacy fleet remains viable through 2040. The Strategic Guidance for the 21st Century Defense reaffirmed the need for a new, survivable bomber capable of projecting power and deterring adversaries in anti-access and area denial environments. We believe the LRS-B is the platform that will provide a visible and flexible nuclear deterrent capability; providing our COCOMs critical operational flexibility across a wide range of military operations. Providing both conventional and nuclear capability, LRS-B will give the President options to hold targets at risk around the globe; thus, fulfilling our national security objectives for years to come.

Lieutenant General Arnold W. Bunch, Jr.

Lt. Gen. Arnold W. Bunch, Jr., is the Military Deputy, Office of the Assistant Secretary of the Air Force for Acquisition, the Pentagon, Washington, D.C. He is responsible for research and development, test, production, and modernization of Air Force programs worth more than $32 billion annually.

General Bunch was commissioned in 1984 as a graduate of the U.S. Air Force Academy. He completed undergraduate pilot training in 1985. He completed operational assignments as an instructor, evaluator and aircraft commander for B-52 Stratofortresses. Following graduation from the Air Force Test Pilot School, General Bunch conducted developmental testing in the B-2 Spirit and B-52 and served as an instructor in each. Additionally, he has commanded at the squadron, group and wing levels. Prior to his current assignment, he was the Commander of the Air Force Test Center, headquartered at Edwards Air Force Base, California.

EDUCATION
1984 Bachelor of Science degree in civil engineering, U.S. Air Force Academy, Colorado Springs, Colo.
1991 Squadron Officer School, Maxwell AFB, Ala.
1994 Master of Science degree in mechanical engineering, California State University Fresno
1996 Army Command and General Staff College, Fort Leavenworth, Kan.
2000 Master of Science degree in national security strategy, National War College, Fort Lesley J. McNair, Washington, D.C.

ASSIGNMENTS
1. July 1984 - July 1985, Student, undergraduate pilot training, Columbus Air Force Base, Miss.
2. August 1985 - December 1985, Student, B-52 Combat Crew Training School, Castle AFB, Calif.
3. January 1986 - June 1990, Standardization and Evaluation Instructor Aircraft Commander, 325th Bomb Squadron, Fairchild AFB, Wash.
4. July 1990 - June 1991, Student, USAF Test Pilot School, Edwards AFB, Calif.
5. July 1991 - June 1992, Test Pilot, 6512th Test Squadron, Edwards AFB, Calif.
6. July 1992 - June 1995, Test Pilot, 420th Test Squadron, Edwards AFB, Calif.
7. June 1995 - June 1996, Student, Army Command and General Staff College, Fort Leavenworth, Kan.
8. July 1996 - July 1999, Chief, B-1 Test and Evaluation, B-1 System Program Office, Wright-Patterson AFB, Ohio
9. August 1999 - June 2000, Student, National War College, Fort Lesley J. McNair, Washington, D.C.
10. June 2000 - July 2002, Commander, 419th Flight Test Squadron, Edwards AFB, Calif.
11. August 2002 - April 2003, Chief, Senior Officer Management, Air Force Materiel Command, Wright-Patterson AFB, Ohio
12. April 2003 - June 2004, Deputy Chief, Combat Forces Division, the Pentagon, Washington, D.C.
13. June 2004 - January 2006, Director, Munitions Directorate, Air Force Research Laboratory, Eglin AFB, Fla.
14. January 2006 - May 2008, Commander, 412th Test Wing, Edwards AFB, Calif.
15. June 2008 - March 2010, Vice Commander, Air Armament Center, Eglin AFB, Fla.
16. March 2010 - June 2011, Director and Program Executive Officer for the Fighters and Bombers Directorate, Aeronautical Systems Center, Wright-Patterson AFB, Ohio
17. June 2011 - June 2012, Commander, Air Force Security Assistance Center, AFMC, Wright-Patterson AFB, Ohio
18. June 2012 - June 2015, Commander, Air Force Test Center, Edwards AFB, Calif.
19. June 2015 - present, Military Deputy, Office of the Assistant Secretary of the Air Force (Acquisition)

FLIGHT INFORMATION
Rating: command pilot
Flight hours: more than 2,500 hours
Aircraft flown: B-52, B-2, KC-135, F-16, T-38 and others

MAJOR AWARDS AND DECORATIONS
Legion of Merit with two oak leaf clusters
Meritorious Service Medal with five oak leaf clusters
Aerial Achievement Medal with oak leaf cluster
Air Force Commendation Medal
Air Force Achievement Medal
Combat Readiness Medal
National Defense Service Medal with oak leaf cluster
Global War on Terrorism Service Medal

EFFECTIVE DATES OF PROMOTION
Second Lieutenant May 30, 1984
First Lieutenant May 30, 1986
Captain May 30, 1988
Major Dec. 1, 1995
Lieutenant Colonel Sept. 1, 1998
Colonel June 1, 2004
Brigadier General May 7, 2010
Major General Aug. 23, 2013
Lieutenant General June 24, 2015

(Current as of June 2015)

Randall G. Walden

Randall G. Walden, a member of the Senior Executive Service, is Director of the Air Force Rapid Capabilities Office, Office of the Administrative Assistant to the Secretary of the Air Force, Washington, D.C. He directs selected study, development and fielding activities tasked directly by the Under Secretary of Defense for Acquisition, Technology and Logistics, the Secretary of the Air Force, and the Chief of Staff of the Air Force. The Air Force Rapid Capabilities Office has been responsible for development and deployment of significant upgrades to the Integrated Air Defense System now operational around the National Capital Region and the launch and experimental operations of the X-37 Orbital Test Vehicle. Other responsibilities include technical integration of Department of Defense classified activities, and the representation of these activities to Headquarters U.S. Air Force, the Office of the Secretary of Defense, Congress and the White House.

Mr. Walden graduated from Christopher Newport College, Newport News, Va., in 1982. He was commissioned in the U.S. Air Force the same year and served as a flight test engineer with Air Force Material Command at Edwards Air Force Base, California, Patuxent River Naval Air Station, Maryland, and Nellis AFB, Nevada. During his tours as a flight test engineer, Mr. Walden participated in the development, ground and flight-testing of numerous aerospace weapon systems. He holds a master non-rated aircrew badge.

Mr. Walden retired from active duty in 2002 with more than 20 years of military experience as an acquisition and technical professional. He was appointed to the Senior Executive Service in 2002, serving on the Air Staff as the Director for Information Dominance Programs, Assistant Secretary of the Air Force (Acquisition) and Director, Air Force Test and Evaluation, prior to his current position.

EDUCATION

1982 Bachelor of Science in Mathematics, Christopher Newport College, Newport News, Va.
1984 Bachelor of Science in Aerospace Engineering, Parks College of St. Louis University, Cahokia, Ill.
1987 Flight Test Engineer Course, U.S. Air Force Test Pilot School, Edwards AFB, Calif.
1989 Squadron Officer School, Maxwell AFB, Ala.
1991 Master of Science in Engineering Management, Florida Institute of Technology, Patuxent River, Md.
1996 Air Command and Staff College, by correspondence
1997 Advanced Program Manager Course, Defense Systems Management College, Fort Belvoir, Va.
2003 Senior Executive Service Seminar, Air University, Maxwell AFB, Ala.

CAREER CHRONOLOGY

1. 1982 - 1984, student, Air Force Institute of Technology, Parks College of St. Louis University, Cahokia, Ill.
2. 1984 - 1989, flight test engineer, F-16 Combined Test Force, Edwards AFB, Calif.
3. 1989 - 1992, lead avionics flight test engineer, V-22 Multi-Service Test Team, Patuxent River NAS, Md.
4. 1992 - 1997, operations officer and flight test program manager, Nellis AFB, Nev.
5. 1997 - 1998, classified flight test squadron commander, Nellis AFB, Nev.
6. 1998 - 1999, Deputy Chief, Advanced Technology Division, Directorate of Special Programs, Office of the Assistant Secretary of the Air Force for Acquisition, Washington, D.C.
7. 1999 - 2002, Chief, Special Studies Division, Air Force Red Team, Directorate of Special Programs, Office of the Assistant Secretary of the Air Force for Acquisition, Washington, D.C.
8. 2002 - 2003, Technical Director, Directorate of Special Programs, Office of the Assistant Secretary of the Air Force for Acquisition, Washington, D.C.
9. 2003 - 2009, Technical Director, Special Programs, Air Force Rapid Capabilities Office, Office of the Assistant Secretary of the Air Force for Acquisition, Washington, D.C.

10. 2009 - 2009, Deputy and Technical Director, Air Force Rapid Capabilities Office, Office of the Administrative Assistant to the Secretary of the Air Force, Washington, D.C.
11. 2009 - 2013, Director, Information Dominance Programs, Office of the Assistant Secretary of the Air Force for Acquisition, Washington, D.C.
12. 2013 - 2014, Director, Test and Evaluation, Headquarters U.S. Air Force, Washington, D.C.
13. 2014 - present, Director, Air Force Rapid Capabilities Office, Office of the Administrative Assistant to the Secretary of the Air Force, Joint Base Anacostia-Bolling, Washington, DC

AWARDS AND HONORS
Defense Meritorious Service Medal
Meritorious Service Medal
Aerial Achievement Medal
Air Force Achievement Medal
2007 Meritorious Senior Professional Presidential Rank Award

PROFESSIONAL MEMBERSHIPS AND ASSOCIATIONS
Society of Flight Test Engineers

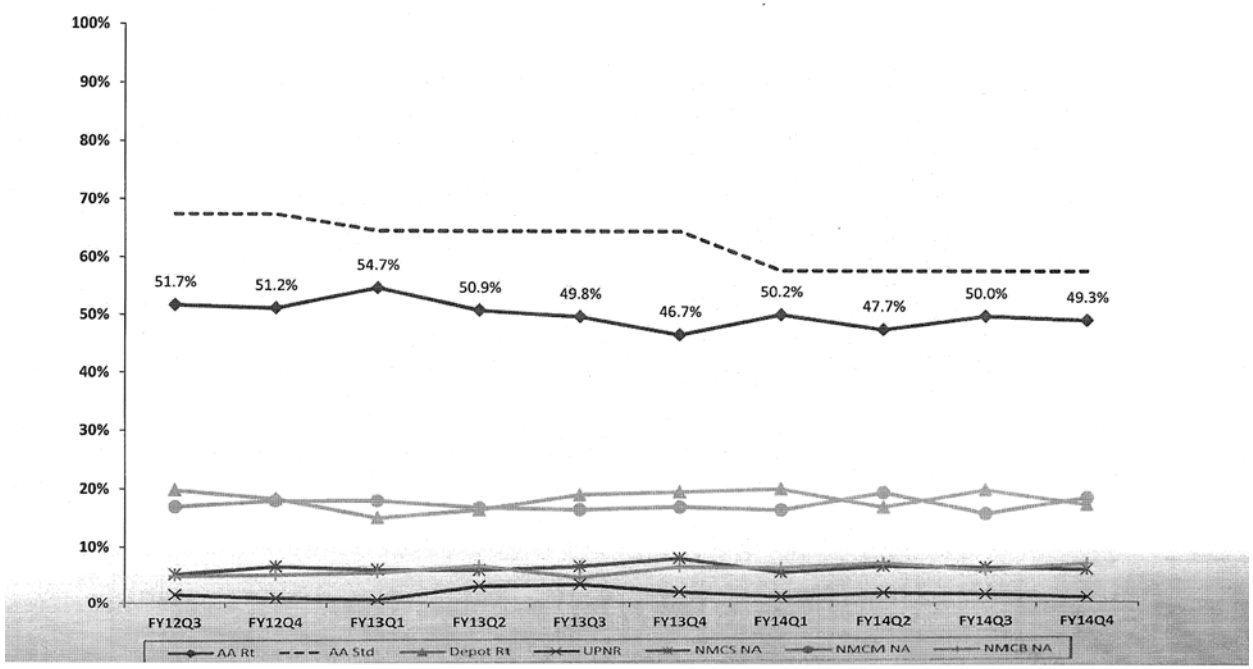
(Current as of July 2014)

DOCUMENTS SUBMITTED FOR THE RECORD

SEPTEMBER 29, 2015

UNCLASSIFIED

AIR FORCE AVAILABILITY
BOMBERS



AVAILABILITY TRENDS
BOMBERS

- Total Air Force overall weapon systems included:
  - B-1B
  - B-2A
  - B-52H
- Aircraft Availability Standard (AA Std): MAJCOM developed mission requirement IAW AFI 21-103
- Aircraft rates include Aircraft Availability (AA), and the components of non-availability.
  - AA rate (AA Rt) reflects the percentage of the aircraft total active inventory (TAI) that are capable of performing at least one assigned wartime mission
  - Depot rate reflects the percentage of aircraft TAI that are in depot status
  - Unit Possessed Not Reported UPNR reflects the percentage of aircraft TAI that are awaiting some depot disposition or action.
  - NMCS-NA rate reflects the percentage of aircraft unable to meet any wartime missions due to supply only
  - NMCM-NA rate reflects the percentage of aircraft unable to meet any wartime missions due to maintenance only
  - NMCB-NA rate reflects the percentage of aircraft unable to meet any wartime missions due to both maintenance and supply

Note: *This data includes only "Operational Aircraft" … training, test and support aircraft are not included;*

Total Air Force implies all components (Active, Reserve, & Air National Guard) are included

UNCLASSIFIED

QUESTIONS SUBMITTED BY MEMBERS POST HEARING

SEPTEMBER 29, 2015

QUESTIONS SUBMITTED BY MR. FORBES

Mr. FORBES. Will B–1, B–2 and B–52 bombers be fully airspace compliant by the 202 mandate? If not, how many and of which type will not be compliant? Furthermore, what steps will be taken to mitigate the impact of noncompliance?

General RAND. Due to fiscal constraints within the Nuclear Deterrence Operations portfolio, current projections indicate that no AFGSC bomber will meet the FAA's mandate of 2020 for ADS–B compliance. Partial solutions have been funded for each airframe, however all still require additional funding for programs and integration for complete ADS–B compliance.

We are currently working within the Air Force corporate process to fund these programs and will continue work to develop a solution and aircraft installation.

While we do not yet know what the FAA's decision will be with regard to approval to fly in certain airspace, it is likely we will have to submit waivers for flight approval which would impact aircrew training and readiness. At a minimum, we expect increased routing around high density airspace that would drive increases to average sortie durations on training missions. We are unable to speculate the impact to contingency missions.

QUESTIONS SUBMITTED BY MS. BORDALLO

Ms. BORDALLO. The LRS–B is expected to be far more than just a bomber. It will link sensors and shooters across the battlespace while being a vital node in the combat cloud. How are we changing our concept of operations to ensure we take advantage of these capabilities? How are we implementing lessons learned from current conflicts regarding battlespace awareness and sensor fusion?

General RAND. There are over three decades of lessons learned and operational experience that will inform the initial baseline of operations for LRS–B when it fields. Additionally, its operational and tactical employment will evolve as the system matures. LRS–B is one part of a "family of systems" portfolio including Intelligence, Surveillance, and Reconnaissance (ISR); electronic warfare; prompt strike; communications; and weapons effects. LRS–B's long range, significant payload, and survivability will contribute to the capability to hold future targets at risk; this will enable the nation's ability to maintain dominance over evolving threats by adversaries employing advanced anti-access and area denial (A2AD) strategies.

Ms. BORDALLO. Does the Air Force have plans to re-engine the B–52 to reduce the maintenance requirements and increase fuel efficiency? Have you performed a cost-benefit analysis of a re-engining compared to any alternatives?

General RAND and General BUNCH. The Air Force does not currently have a requirement to re-engine the B–52; however, we are exploring the potential to reduce B–52 engine maintenance and increase efficiency by conducting a re-engine cost-benefit analysis (CBA). Of note, the existing TF–33 engines are supportable through the projected service life of the aircraft. In support of the CBA, the AF released a Request For Information in Dec 14 to determine the benefits of existing engines in the commercial market place—there were five respondents. The CBA is still under development and, after review, is expected to be complete by 2Q FY16. Any plans to re-engine the B–52 will be informed by the outcome of the cost-benefit analysis, which will then enable us to make decisions on the best way ahead.

Ms. BORDALLO. How are we developing the long-term strategy for procuring and sustaining the LRS–B while including planned upgrades over the life of the system?

General BUNCH. In order to make sure that this was done right from the beginning, the program office team worked very successfully in lock-step with Air Combat Command (ACC) and Air Force Global Strike Command (AFGSC) establishing the operational needs and requirements. The APUC of $550 million, in base year 2010 dollars, is a key requirement for the program and drove the requirements and technology trades of the design. In May of 2013 General Welsh approved the program requirements. Over the past three years the program office has worked closely with industry to ensure designs and requirements remained stable. We have completed Preliminary Design Reviews and Manufacturing Readiness Reviews which demonstrate the program is at the highest level of technology maturity seen on a new

aircraft development at this stage. The platform design is at subsystem level and there is a very high fidelity for the structure, electronics, hydraulics, engines, air data systems, and the low-observable technology.

Maintainability has been a key focus area. Numerous placement reviews have been accomplished to ensure components are accessible and access allows streamlined diagnostic testing. Additionally, the LRS–B is being designed to have an open architecture. The Air Force Open Mission Systems (OMS) standards establish an open architecture, provide streamlined processes for systems integration and encourage competition. The program has built-in an appropriate level of adaptability through design margin and open systems, allowing for affordable upgrades as technology advances and threats evolve. OMS sustains competition throughout the aircraft design and life cycle, and enables long-term affordability while enhancing supportability.

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