

Stenographic Transcript
Before the

COMMITTEE ON
ARMED SERVICES

UNITED STATES SENATE

HEARING TO RECEIVE TESTIMONY ON
THE POSTURE OF
THE DEPARTMENT OF THE AIR FORCE
IN REVIEW OF THE DEFENSE AUTHORIZATION REQUEST
FOR FISCAL YEAR 2019 AND
THE FUTURE YEARS DEFENSE PROGRAM

Tuesday, April 24, 2018

Washington, D.C.

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10 U.S. Senate
11 Committee on Armed Services
12 Washington, D.C.

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14 The committee met, pursuant to notice, at 9:30 a.m. in
15 Room SD-G50, Dirksen Senate Office Building, Hon. James M.
16 Inhofe, presiding.

17 Committee Members Present: Senators Inhofe
18 [presiding], Wicker, Fischer, Cotton, Rounds, Ernst, Tillis,
19 Sullivan, Cruz, Scott, Reed, Nelson, McCaskill, Shaheen,
20 Gillibrand, Blumenthal, Donnelly, Hirono, Kaine, King,
21 Heinrich, Warren, and Peters.

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1 OPENING STATEMENT OF HON. JAMES M. INHOFE, U.S.
2 SENATOR FROM OKLAHOMA

3 Senator Inhofe: The committee meets today to receive
4 testimony on the posture of the U.S. Air Force and its
5 fiscal year 2019 budget request.

6 We welcome our witnesses: Secretary Heather Wilson and
7 General David Goldfein. Fein is fine. We all remember
8 that.

9 The Air Force is at a critical moment in its history.
10 It faces a dual task of digging out of a readiness crisis
11 while at the same time managing a broad modernization
12 effort. You do not have the luxury of choosing one or the
13 other. You got to do both.

14 I was pleased to see increases in the budget request
15 for fiscal year 2019 to address both readiness and
16 modernization, but I am interested to hear from you how the
17 Air Force will manage this balance in the years ahead,
18 particularly if the Budget Control Act funding levels return
19 in 2020.

20 And I continue to be concerned with the availability of
21 aircraft and the preparedness of our airmen. Trends in
22 pilot retention remain troubling with the current shortage
23 of some 2,000 pilots. It was not long ago that we were
24 using the figure 1,500. So it does not seem to be getting
25 any better and we need to address that.

1 The NDS makes clear that space is and will continue to
2 be a contested environment. Both Russia and China continue
3 their robust efforts to extend warfighting into outer space,
4 and we can no longer take our space-enabled capabilities for
5 granted. All of this makes our dismal space failures even
6 more detrimental.

7 Despite recent reforms, lasting change will require
8 your leadership and vision to sustain a whole-of-the-
9 government approach.

10 Finally, I look forward to hearing about the progress
11 of the Air Force nuclear modernization efforts. As we heard
12 in the Nuclear Posture Review earlier this year, we cannot
13 afford to stand still in this area when our adversaries have
14 been investing in their nuclear forces for the last 2
15 decades. I know the Air Force has been working hard on the
16 new bomber and missile programs, as well as new engines for
17 the B-52. New engines for the B-52. I just noticed that
18 the life extension now is going to be 2050. It is going to
19 be 100 years old by that time.

20 But anyway, Senator Reed.

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1 STATEMENT OF HON. JACK REED, U.S. SENATOR FROM RHODE
2 ISLAND

3 Senator Reed: Thank you very much, Mr. Chairman. Let
4 me join you in welcoming Secretary Wilson and General
5 Goldfein. Thank you for your service and thank you for your
6 great leadership of the United States Air Force. We are
7 grateful also to the men and women of the Air Force who do
8 so much, and please convey to them our deep appreciation and
9 thanks, as you always do.

10 Our witnesses this morning face huge challenges as they
11 strive to balance the need to support ongoing operations and
12 sustain readiness with the need to modernize and keep the
13 technological edge in the three critical domains of air,
14 space, and cyberspace.

15 The Air Force has produced a budget that even with
16 proposed budget increases reflects very tough decisions.
17 The budget increases the Air Force is proposing for fiscal
18 year 2019 would seek to increase readiness, address
19 shortfalls in munitions, address shortfalls in pilots and
20 maintenance personnel, and modernize our strategic deterrent
21 capability.

22 In addition, the Air Force faces a continuing challenge
23 in managing the cost and progress of its major acquisition
24 programs, including the Joint Strike Fighter, the most
25 expensive DOD acquisition program in history, and a new

1 tanker and a new bomber. We should hear from our witnesses
2 on the progress of all three of these programs this morning.

3 I would also like to hear more about another
4 modernization program. In this budget, the Air Force is
5 proposing to truncate the program to modernize the Joint
6 Surveillance and Target Radar System, or JSTARS program.
7 The Air Force deserves our careful consideration of this
8 proposal, but we must consider it against the recent history
9 of abrupt Air Force program changes.

10 The Air Force tried several years to retire the A-10
11 fleet. Congress turned down the proposals. Now the Air
12 Force is keeping the A-10 and will continue experimenting
13 with a new light attack aircraft called OA-X that would
14 undoubtedly be less survivable than the A-10. Spending for
15 OA-X could cost the Air Force several hundred million
16 dollars or more.

17 The Air Force supported a Nunn-McCurdy certification
18 that the Global Hawk remotely piloted vehicle was critical
19 to national security and then proposed canceling the program
20 in favor of the U-2 program within a few months of the
21 Global Hawk certification. Later the Air Force wanted to
22 cancel the U-2 program in favor of the Global Hawk.

23 The Air Force first proposed to retire nearly half of
24 the Compass Call aircraft without replacement, then decided
25 that modernizing the Compass Call program was so important

1 that they had to pursue a sole-source contracting strategy
2 for the program.

3 The Air Force was pursuing a program to buy the C-27
4 airlift aircraft because Air Force witnesses said that the
5 C-130 airlift aircraft could not meet their requirements.
6 Later the Air Force canceled the C-27 program and said that
7 the C-130 was perfectly fine for meeting the direct support
8 mission.

9 With regard to the JSTARS program, the Air Force
10 originally proposed to retire a sizeable portion of the
11 current fleet of JSTARS aircraft with no immediate
12 replacement in sight. When Congress turned down that
13 proposal, the Air Force submitted a modernization plan to
14 replace the existing capability with a new business jet and
15 a new radar. The contract to implement the JSTARS
16 modernization plan is currently in source selection. But
17 now, as I mentioned earlier, the Air Force's fiscal year
18 2019 budget proposes to cancel that JSTARS solicitation and
19 pursue another path. The Air Force has mentioned the
20 National Defense Strategy as a reason for making this
21 decision, but the indication about this decision seems to
22 have been made before the National Defense Strategy.

23 I look forward to hearing about updating these efforts
24 and all your efforts, including progress on improving
25 shortfalls within the remotely piloted aircraft community

1 and shortfalls within the larger pilot personnel community.

2 Again, thank you very much for your committed
3 leadership to the Air Force, and thank you for being here
4 today.

5 Senator Inhofe: Thank you, Senator Reed.

6 Secretary Wilson and General Goldfein, we want to hear
7 your opening statements. We will start with you, Secretary
8 Wilson.

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1 STATEMENT OF HON. HEATHER A. WILSON, SECRETARY OF THE
2 AIR FORCE

3 Dr. Wilson: Thank you, Mr. Chairman.

4 I would like, with consent, to put my entire statement
5 in the record.

6 Senator Inhofe: Without objection.

7 Dr. Wilson: And just summarize a few points.

8 First of all, Mr. Chairman and Ranking Member Reed,
9 thank you very much for the hearing today.

10 I would like to highlight a few things that are in our
11 fiscal year 2019 budget proposal.

12 The budget proposal for fiscal year 2019 does align
13 with the National Defense Strategy, and we developed this
14 budget proposal at the same time the National Defense
15 Strategy was being drafted. And so there is a direct
16 influence there.

17 The National Defense Strategy recognizes that we face a
18 more competitive and dangerous international security
19 environment than we have faced in decades. Great power
20 competition has reemerged as the central challenge for U.S.
21 security and prosperity.

22 There are what I would say are two bold moves in this
23 budget and one continuing theme.

24 With respect to the bold moves and the changes, we are
25 accelerating defendable space to deter, defend, and prevail

1 against anyone who seeks to deny our ability to freely
2 operate in space. There is an 18 percent increase from the
3 fiscal year 2018 5-year defense plan to the fiscal year 2019
4 5-year defense plan in space, and there are significant
5 changes there.

6 The second bold move is the shift to multi-domain
7 operations, particularly with respect to command and control
8 and the way in which we do command and control in a
9 disaggregated way rather than relying on a platform-centric
10 upgrade, which is the JSTARS program.

11 So those are the two large shifts and changes driven by
12 the environment within which we find ourselves.

13 The continuing theme and the continuing effort is to
14 keep improving the readiness of the force to win any fight
15 anytime. In fiscal year 2017, we kind of started to turn
16 the corner. The additional resources added by the Congress
17 in fiscal year 2018 are helping us to start to climb out of
18 a readiness deficit, and the fiscal year 2019 proposal with
19 the budget certainty that the Congress has given us will
20 help us to restore the readiness of the force. And I wanted
21 to thank you publicly for that effort. We need that
22 certainty and we are committed to using the dollars which
23 you appropriate wisely in the defense of the nation.

24 Chief?

25 [The prepared statement of Dr. Wilson and General

1 Goldfein follows:]

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1 STATEMENT OF GENERAL DAVID L. GOLDFEIN, CHIEF OF
2 STAFF, UNITED STATES AIR FORCE

3 General Goldfein: Thank you, Senator Inofe, Ranking
4 Member Reed, distinguished members of the committee. It is
5 an honor for Secretary Wilson and I to represent 670,000
6 airmen as we update you on the Air Force and our budget
7 proposal for 2019.

8 And I will begin by thanking this committee for its
9 leadership in building and then gaining approval for a
10 historic budget that will continue the rebuilding of the
11 U.S. military as we return to an era of great power
12 competition. And central to this effort was the
13 perseverance, tenacity, and leadership of Chairman John
14 McCain, who we know is recovering today in his beloved
15 Arizona. As airmen we will never forget that he shared his
16 Vietnam POW experience with men like Bud Day and Lance
17 Sijan. We admire his leadership and wish him and his family
18 our warmest regards as he takes on this latest challenge and
19 we hope to see him soon in these hallowed chambers.

20 A fitting testimony to his unwavering dedication and
21 commitment, this budget request allows our nation to
22 confront today's threats and moves us towards an Air Force
23 we need to face tomorrow's challenges. As airmen, we first
24 defend the homeland and our allies with a safe, secure, and
25 effective nuclear deterrent, and we are expected to own the

1 high ground with air and space superiority. And as stated
2 in the National Defense Strategy, we are expected to project
3 America's military power forward with our allies and our
4 partners as we bring global vigilance, global reach, and
5 global power to the joint team.

6 This historic budget we discuss today continues the
7 recovery you set in motion in 2017 when we stopped the
8 continued erosion of our readiness following years of budget
9 instability. In 2016, our pilots averaged just 17 hours of
10 flying time per month. We were able to advance that number
11 to 19 hours in 2018, and with this budget, we begin
12 restoring pilot proficiency to 21 hours per month in 2019.
13 Pilots join to fly and this budget gets them back in the
14 air.

15 In 2016, we faced a shortage of over 4,000 maintainers.
16 In 2018, we will reduce that number to almost zero. 10
17 years of maintenance experience lost cannot be gained
18 overnight. Yet, this budget builds the foundation for a
19 full recovery.

20 9 years of continuing resolutions has negatively
21 affected our munitions manufacturers and the industrial base
22 that we will need in a peer fight. Under CRs, we placed
23 industry in a difficult situation to retain capacity and a
24 roster of highly skilled workers with appropriate security
25 clearances without being able to clearly identify what we

1 could afford to purchase each year. This budget request
2 fully funds preferred munitions to industry capacity,
3 allowing for 9,000 line items above fiscal year 2018 totals.
4 With your continued support of this 2019 budget, for the
5 first time in years, we have a National Security Strategy, a
6 National Defense Strategy, and a Nuclear Posture Review and
7 the resources required to support them.

8 Strategic alignment. Said another way as has been
9 argued so loudly by this committee, for the first time in
10 years, we have a strategy-driven budget versus a budget-
11 driven strategy. And on behalf of all of our airmen, I can
12 only say thank you.

13 However, we also know that we only have visibility on
14 this plan through 2019, and a return to the disastrous
15 budget caps of BCA in 2020 would repeat the damage caused by
16 the 2013 sequester from which we are still recovering as a
17 service.

18 And finally, we are acutely aware that every dollar we
19 are given is a dollar that was earned by Americans. It is
20 our solemn obligation to remain good stewards of those
21 dollars.

22 Thank you again for the opportunity this morning to
23 testify on behalf of airmen who are standing the watch.

24 Secretary Wilson and I welcome your questions.

25 Senator Inhofe: Thank you, General Goldfein.

1 I appreciate your comments about Senator McCain, and in
2 his behalf right now, I will read his statement since a
3 quorum is present.

4 Since the quorum is now present, I ask the committee to
5 consider a list of 256 pending military nominations.
6 Included on this list are the nominations of Admiral
7 Davidson to be Commander, U.S. Pacific Fleet; General
8 O'Shaughnessy to be the Commander of the U.S. Northern
9 Command and NORAD. All these nominations have been before
10 the committee the required length of time.

11 Is there a motion to favorably report this list of 256
12 pending nominations to the Senate?

13 Senator Reed: So moved.

14 Senator Wicker: Second.

15 Senator Inhofe: All in favor, say aye.

16 [Chorus of ayes.]

17 Senator Inhofe: The motion carries.

18 About a month ago, several of us on this committee,
19 Senator Ernst, Senator Rounds, Senator Sullivan, myself, and
20 also a couple of members from the House Armed Services
21 Committee were in the South China Sea. It is kind of hard
22 to convince the American people that our image in that area
23 is not really up and equal to China's image. We all know
24 about what has happened in terms of the islands that they
25 have created, and they are up over 3,000 acres right now.

1 It is all as if they are preparing for World War III, and
2 those words came from our allies over there, not from me.
3 It is pretty frightening when you see some seven islands
4 that were illegally created and have nothing except really
5 military equipment, cannons, and all of that.

6 And so we are finding allies that we have there, and we
7 talked to all of them, the Philippines, South Korea, Taiwan,
8 Japan. It is almost as if they are taking sides. Who shall
9 it be? China or the United States? Whether we like it or
10 not, that is our current image there, and I am really
11 concerned about giving some kind of assurance to our allies
12 that we are being prepared in a different way that may not
13 be visible now.

14 Do you have any thoughts about that, Secretary Wilson,
15 about reassuring our allies over there that we are in the
16 game?

17 Dr. Wilson: Mr. Chairman, our responsibility is to be
18 strategically predictable to our allies and to be there and
19 to be operationally unpredictable to our adversaries.

20 The Chief and I went to the Pacific to the Philippines,
21 South Korea, Japan. The Chief then went on to India.

22 Senator Inhofe: When was this?

23 Dr. Wilson: In January to reassure them. Last week,
24 we had a Five Eyes meeting, as well as meetings with the
25 Japanese, the French, the Norwegians, and others about our

1 space partnerships and opened up our space schoolhouse to
2 more allies and partners. We are stronger together than we
3 are alone.

4 I do not know if the Chief wants to talk a little more
5 about our operational partnerships.

6 Senator Inhofe: And, Chief, what I am getting at here
7 is the image that we have over there, which I am sure you
8 saw at the same time that you were there.

9 General Goldfein: Yes, sir. And what I will tell you
10 is that a big part of the air component story in the Indo-
11 Pacific region is the stability of our forces over time. If
12 you take a look at the drastic reductions that we have taken
13 over time across the Air Force, where we have had to pull
14 forces is primarily from CONUS, or here in the U.S., and in
15 Europe where we have come down significantly over the years.
16 If you look at where we are in the Pacific, it has actually
17 been fairly stable over time. And so our commitment to our
18 fellow air chiefs there and how we exercise, how we operate,
19 whether that is on the Korean Peninsula or throughout the
20 region, has remained stable, and I project it will remain
21 stable over time. And then with this increased budget, it
22 gives us an opportunity to further reinforce that air
23 component solidarity with our allies and partners there in
24 the region.

25 Senator Inhofe: I think that is significant, and I

1 appreciate that very much. I wanted to get that on record.

2 Senator Reed mentioned several of the vehicles that are
3 out there that we are modernizing right now. The one that
4 is of greatest interest to me perhaps is the KC-46. When
5 you stop and think about the KC-135 having endured -- what--
6 59 years, I look at this as something that is going to be
7 probably in that same situation.

8 Secretary Wilson, we are anxious for the first KC-46 to
9 get delivered to the Air Force. We understand that is going
10 to happen this year. We have had some delays on the first
11 delivery, and we are all very interested in that.

12 The President's budget had, I think, 15 coming on
13 board, the KC-46. Do you agree that that is an adequate
14 number, an achievable number, and a desirable number?

15 Dr. Wilson: Yes, sir. I think that is a desirable
16 number.

17 We have had meetings with Boeing and additional
18 meetings last week to get an agreement on a schedule. We
19 believe, the Air Force believes, that the schedule that
20 Boeing has is still overly ambitious, and we would like to
21 get agreement on a delivery date and drive to that delivery
22 date.

23 Senator Inhofe: What do you think about the
24 President's budget having 15 in it, General Goldfein?

25 General Goldfein: Sir, also I agree with the Secretary

1 that it is absolutely a desirable number and a sustained
2 number over time as we bring that weapon system on. As you
3 know, I would offer that we are a global power because of
4 our global reach, and it is all the services that rely on
5 that tanker force and our allies and partners to be able to
6 project power globally. So it is a critical capability that
7 we need to bring on as fast as we can bring it on.

8 Senator Inhofe: Agreed. Thank you.

9 Senator Reed?

10 Senator Reed: Well, thank you very much, Mr. Chairman.

11 First, let me note that I had the opportunity to go
12 down and visit the B-21 facilities in Florida and was very
13 impressed with the management, both the Air Force and the
14 contractor. I know you are paying quite a deal of attention
15 to that, and thank you for your efforts in that regard.

16 I want to go back to the JSTARS issue I raised. My
17 sense of the back and forth -- and it has been over several
18 years. So this is not a recent development -- is that
19 originally the aircraft was going to be retired without
20 replacement, and then Congress said no. And then the Air
21 Force came back with a modernization plan for a business jet
22 with a radar and then went into a source solicitation
23 process for that. And then now in 2019, the proposal is
24 they canceled that solicitation and pursued another path.
25 And some rationale has been the National Defense Strategy,

1 but we got a sense that this was going to be the 2019
2 proposal even before the NDS came out.

3 So either the Secretary or the Chief of Staff, can you
4 give us some ideas about what is going on?

5 Dr. Wilson: Senator, we were working on the National
6 Defense Strategy for about 9 months before it was published,
7 and I think the last version that I saw had version 67 on
8 it. So we understood the direction we were going to be
9 guided to go before it was actually published in January.
10 So it did influence our fiscal year 2019 budget submission.

11 There are several things that have changed. And I was
12 on the National Security Council staff in 1991 when JSTARS
13 was a new invention. We pushed it forward into the fight
14 when Saddam Hussein invaded Kuwait, and it was a
15 transformative capability. But in 1991, I did not have a
16 cell phone. Nobody in this room had a cell phone, and
17 technology was different. So is the threat.

18 So the threat is changing and we have been guided to
19 say what do we need to do in a contested environment to
20 support the ground operators because that is what this is
21 about. We know that it will not survive close to the battle
22 area. It looks forward about a couple hundred miles onto
23 the ground to look at what troops are amassing out there to
24 attack us.

25 So we asked them to see if they could come up with a

1 better way to solve the problem. The proposal we put
2 forward integrates multiple sensors, space, air, manned,
3 unmanned, ground, fuses that data instead of having one
4 aircraft doing a loop close to the battle area. We also
5 know that we can keep JSTARS. We have looked at the
6 airframes. We think we can keep them a little longer than
7 we thought. That opens this opportunity. We will extend
8 and bring back some AWACS to help as well, and they are a
9 little further off from the forward edge of the battle area.
10 We had the engineers come in and scrub this plan so that the
11 technology readiness level is high. We think this is a
12 better answer, and that is why we put it forward in the
13 budget.

14 Senator Reed: General Goldfein, your comments, please.

15 General Goldfein: Yes, sir. First, I would like to
16 make sure that there is no question in anybody's mind that
17 we are committed to staying shoulder to shoulder with Army,
18 Navy, Marine Corps as we continue to look at the fight in
19 the future. I have been fighting side by side with the Army
20 my entire career, and it is my obligation I believe, as the
21 Secretary organized train and equip, to ensure that any
22 soldier, sailor, marine, airman who are on the ground who
23 hear jet noise -- I never want them to look up. I want them
24 to know it is us, and we owe that to them.

25 So this is about ensuring that we understand the

1 problem that we have to solve, and the problem, as the
2 Secretary has laid out, is that we have to simultaneously be
3 able to provide a common ground picture to an individual on
4 the ground of enemy movement in both a contested and a non-
5 contested environment. And we do not have the luxury of
6 doing it either/or.

7 And so given that challenge, we went and looked at
8 original assumptions. And you asked what has changed that
9 caused us to change. The Secretary laid this out. The most
10 fundamental change is when we did a deep dive into the
11 fuselage, we learned that we can fly the current frame
12 through the mid to late 2020s, 2028. So the fundamental
13 assumption we started with was that these airplanes were
14 going to stop flying in 2018. So we had to solve the
15 platform problem with a platform solution. That gave us
16 time to step back and say is this the best plan to be able
17 to solve both the contested and uncontested because we do
18 not want someone in a contested environment on the ground,
19 which is where we will be, to be blind to enemy movement on
20 day one of that campaign.

21 So given the fact that we can fly longer, we looked at
22 how could we use those resources in a different way to be
23 able to provide that ground moving target and the battle
24 management simultaneously for both Yemen and Kaliningrad.
25 And the best way forward for us is to move into a multi-

1 domain sensing capability that uses space, leverages where
2 commercial space is going, leverages every platform that we
3 are building as a joint team that does ground moving target
4 indicator, or GMTI, and look at disaggregated command and
5 control.

6 And so the plan we moved forward allows us to keep the
7 current capacity through 2028, possibly longer, and gives us
8 10 years now to build a multi-domain capability to be able
9 to fill in the gaps. And the gap that we have got to fill
10 is that Kaliningrad, China campaign gap in a contested
11 environment.

12 Senator Reed: Just quickly because my time has
13 expired. I understand that. It is a very logical
14 presentation. But we are starting now with a new concept
15 and we are at the very beginning stages of trying to develop
16 the many different parts. Is that fair?

17 General Goldfein: I will just say that here is one of
18 the things that we are able to do. Previously we were going
19 to retire seven E-3 AWACS. This allows us to not only bring
20 those airplanes up but to modify them so we can get top
21 secret feeds into AWACS so they can start getting feeds from
22 all kinds of different platforms and capabilities to do that
23 battle management. Every airplane and every platform the
24 joint force is building that has an electronically scanned
25 radar does that business. And so we have access to more

1 capability.

2 The other thing we are going to do is we are going to
3 take MQ-9's and build a GMTI capability on MQ-9's. So a
4 soldier now will have the capability that he does not have
5 today to find, fix, and finish on a single platform based on
6 being able to see movement, put a sensor against it,
7 validate it, fix it, and destroy it with weapons on the
8 wing. So to the soldier on the ground, this is going to be
9 transparent to them. The soldier on the ground in a
10 contested environment is going to be served by the better
11 plan.

12 Senator Reed: Thank you very much.

13 Thank you, Mr. Chairman.

14 Senator Inhofe: Thank you, Senator Reed.

15 Senator Wicker?

16 Senator Wicker: Thank you.

17 Thank you for a bit more optimistic report than we have
18 had in the past years.

19 Let me talk about a problem we still have, the pilot
20 shortage problem in the Air Force, the pilot shortage
21 problem generally, and also pilot training.

22 It has been estimated that there is approximately a
23 2,000 pilot shortage in the Air Force, including 950 fighter
24 pilots. Boeing reports that North America will need 117,000
25 more pilots over the next 20 years.

1 So what are we doing about this? Are we going to max
2 out the UPT bases? And what about this somewhat
3 controversial proposal to add a new contractor-run
4 undergraduate pilot training facility? Do you want to start
5 first, Madam Secretary?

6 Dr. Wilson: Senator, I will.

7 You are right that there is a national shortage of
8 pilots. The airlines are going to be hiring over 4,500
9 pilots a year for the foreseeable future, and they cannot
10 hire anyone for the airlines who have less than 1,500 hours
11 of flying time or 750 hours with the Air Force. There is an
12 inverse relationship between hiring in the airlines and
13 retention in the services. We are going to have to face
14 that challenge.

15 We are facing it in three different ways.

16 The first is to validate our requirements, how many
17 pilots do we really need, and really scrub those numbers.

18 The second is we are trying to do everything we can to
19 retain the pilots we have with quality of service, quality
20 of life, reducing the operating tempo, giving them more
21 choice and options to be able to manage their own careers so
22 that we keep more pilots on active duty. And they came to
23 serve. So there are ways to increase retention but
24 retention cannot be the only answer.

25 Third is we have to increase the number of pilots we

1 are training. The first step is to maximize the capacity of
2 the pilot training bases that we have. We trained about
3 1,100 pilots last year I think was the number. The maximum
4 capacity of our current infrastructure is about 1,400 pilots
5 a year.

6 Senator Wicker: So that is three UPT bases?

7 Dr. Wilson: Yes, sir. Shepherd -- the current UPT
8 bases we have -- it is about 1,400. And it is to do with
9 the airspace, training ranges, runways, ramp space. But it
10 is about 1,400.

11 When you get beyond that, we are looking at whether we
12 should have some flexibility with some contractor
13 undergraduate pilot training, and we are looking at that
14 option. It gives us the ability to increase for a bit and
15 to recover faster and also to ramp back down without
16 affecting the indigenous Air Force capability. So it is an
17 option that we are looking at.

18 Chief?

19 General Goldfein: Sir, I will just add that as we look
20 at this, as you might imagine, we have been out eyeball to
21 eyeball with our pilot force listening to them, squinting
22 with our ears to make sure we understand what are those
23 actions that we could take that would keep them in the Air
24 Force because the part we cannot control is the overall
25 problem statement, and that is that we as a nation do not

1 produce the pilots we need to adequately service business,
2 commercial, and military aviation. That is a national
3 challenge. We cannot control that.

4 But what we can control are those things that we do
5 within the service. And as the Secretary laid out, it is
6 about increasing production. It is about increasing
7 retention through quality of service and quality of life
8 initiatives, and it is about ensuring that we understand
9 with great fidelity the data that drives the requirement for
10 pilots to go to do the nation's business.

11 Senator Wicker: General, on that last statement -- and
12 that follows up what the Secretary said about validating the
13 requirement. Are you saying that the requirement might not
14 quite be 2,000 pilots and it might not quite be 950 pilots?
15 Is that what you are saying?

16 General Goldfein: No, sir. What I am saying is that
17 where we actually place pilots -- because to have a healthy
18 and mature weapon system, you have to have enough pilots
19 that actually fly the aircraft.

20 Senator Wicker: Okay, well, are you pretty sure that
21 we are in the ballpark on a 2,000 pilot shortage?

22 General Goldfein: Yes.

23 Senator Wicker: And do we need to be part of a larger
24 conversation with industry and frankly with our allies about
25 the international pilot shortage? Yes, ma'am.

1 Dr. Wilson: Sir, I think we do. This is a national
2 shortage. I would say that the only pathway for someone
3 outside of the military to get into the airlines -- I mean,
4 there are very few of them -- crop dusting, flight
5 instructing, or going overseas and flying with a foreign
6 commercial carrier because they do not have the 1,500-hour
7 requirement.

8 Senator Wicker: Thank you.

9 Senator Inhofe: Thank you, Senator Wicker.

10 Senator Shaheen?

11 Senator Shaheen: Thank you, Mr. Chairman.

12 Since we are talking about pilots, I was struck by the
13 news coverage of the Southwest problem last week with its
14 engine and the pilot did such a terrific job. And one of
15 the pieces of that news story was that she had hoped to join
16 the Air Force and had wound up joining the Navy because the
17 Air Force was not as open to women. I assume that is no
18 longer a problem.

19 Dr. Wilson: Senator, I came into the Air Force at
20 about the same time. The Navy opened fighter pilots flying
21 to women earlier than the Air Force, but they could not fly
22 in combat. And I was also part of the effort to change that
23 law back in 1991.

24 Senator Shaheen: Thank you very much. I appreciate
25 that. I thought it was important to make that point.

1 I want to thank you, Secretary Wilson, for taking time
2 to meet with me last week and for the responsiveness of the
3 Air Force to the issue we have at the former Pease Air Force
4 Base with perfluorinated carbon, or PFCs, which have
5 affected the groundwater. It is an issue not just in New
6 Hampshire but at military installations across this country.

7 And I also appreciated Assistant Secretary Henderson
8 coming up and meeting with folks in the community. As you
9 know, through the defense bill last year, the authorization
10 and through the appropriation in the omnibus, we have
11 funding for a health study that is going to be done by the
12 Agency for Toxic Substances and Disease Registry through the
13 CDC. And I just wanted to urge you to do everything you can
14 to make sure that that funding gets transferred as
15 expeditiously as possible. We have 1,500 people who have
16 been tested with elevated levels in the Portsmouth area who
17 are anxious about their future and their children's future.
18 And I know there are many people throughout the Air Force
19 and our other military installations who share that concern.

20 Dr. Wilson: Senator, we will work with you and with
21 HHS, as well as CDC, to make sure that study is done.

22 Senator Shaheen: Thank you very much.

23 You talked about the bold new move, one of which was
24 accelerating defendable space. General Hyten testified at a
25 recent STRATCOM posture hearing regarding his view that the

1 U.S. military should eventually stand up a separate branch
2 for space domain but that now is not the right time to do
3 so. Do you share that view, or do you feel differently
4 about it?

5 Dr. Wilson: Senator, I feel that the United States is
6 the best in the world at space, and our adversaries know it
7 and they will seek -- I know they are developing the
8 capabilities to deny us the ability to freely operate in
9 space in crisis or war. This budget reflects an alignment
10 of the American leadership. The President has set out a
11 National Security Strategy and a National Space Strategy,
12 restarted the Space Council, which the Vice President is
13 chairing. The Secretary of Defense and the Air Force are
14 all aligned on the need to accelerate capabilities which are
15 here in the President's budget. We are building a more
16 lethal and more agile force, and I think this fiscal year
17 2019 budget has a significant commitment to being able to
18 defend ourselves on orbit.

19 Senator Shaheen: So does that mean you think we do not
20 need to set up a separate space force, at least in the
21 foreseeable future?

22 Dr. Wilson: Senator, we are open to discussing ideas
23 that people have in this realm. I think the most important
24 thing is not the organization but what we actually do and
25 that is to defend ourselves on orbit and make clear to any

1 adversary that if they take us on in space, we will prevail.

2 Senator Shaheen: And is there a role for our National
3 Guard in the space domain?

4 Dr. Wilson: Senator, we have National Guard units that
5 are involved in aspects of space, as well as Reserves.

6 Senator Shaheen: Thank you.

7 General Goldfein, you were talking about our efforts in
8 Kaliningrad. And I know one of the things that our European
9 allies are very interested in is our support for the
10 European Deterrence Initiative. Can you talk about what
11 more the Air Force is doing to support that initiative?

12 General Goldfein: Yes, sir. We talked earlier a
13 little bit about our stable presence in the Pacific. The
14 air component story in Europe is actually slightly
15 different. We have taken down significantly over time. And
16 we as an Air Force have gotten so much smaller over time. I
17 mean, if I had been the Chief in 1991 with the Secretary, we
18 would be talking to an Air Force of just shy of a million
19 active, Guard, Reserve, and civilians. And just to give you
20 one force element, 134 fighter squadrons. Today we have 56
21 total and 670,000. So a lot of that reduction came in
22 Europe.

23 And so with this smaller force, the European Defense
24 Initiative from the air component perspective has been an
25 investment in access and basing so we can take this smaller

1 force and push it forward very quickly to compete, deter,
2 and then win, if required, working side by side with our
3 NATO allies. So that is why you have seen so much
4 investment in basing, so much investment in infrastructure
5 as our part of EDI, and I think as we go forward, you will
6 see that continue.

7 Senator Shaheen: Thank you.

8 Thank you, Mr. Chairman.

9 Senator Inhofe: Thank you, Senator Shaheen.

10 Senator Fischer?

11 Senator Fischer: Thank you, Mr. Chairman.

12 General, the RC-135 is the latest in a family of
13 platforms that have served as the backbone of the Air
14 Force's manned ISR mission since 1962. And I am very proud
15 that Nebraska's 55th Air Wing at Offutt Air Force Base is
16 the home of this very unique mission. And as we race to
17 match the pace of new threats, it is critical that we
18 adequately fund this aircraft.

19 The fiscal year 2019 Air Force budget requests funds to
20 make upgrades to the platform. And how have global threats
21 generated a need for this capability?

22 General Goldfein: Yes, ma'am. Thank you.

23 Not only is it a critical capability, as you know, it
24 is a critical capability for our allies. And we share this
25 with the United Kingdom who has this capability as well. So

1 we are finding that this particular capability, without
2 going into the operational details on what happens on that
3 airplane, as we look at peer threats and the return to great
4 power competition, our ability to understand the global
5 picture to be able to ensure that we understand more than
6 our adversaries and can then decide and act in ways that can
7 produce dilemmas for our adversaries and enhance 21st
8 century deterrence, the RC-135 is central to that effort and
9 it will remain so.

10 Senator Fischer: You mentioned it is important for our
11 allies. What about our combatant commanders? What do you
12 hear from them?

13 General Goldfein: Same. As a matter of fact, the
14 demand signal for RC-135 and its capabilities are going up,
15 especially as we look at the peer competitors, the China,
16 the Russia threats, when we look at our posture vice Iran,
17 North Korea. And it has been very successful in our fight
18 against violent extremism. So it actually works across the
19 spectrum of conflict.

20 Senator Fischer: You have also requested funds to
21 convert three KC-135R aerial refueling tankers into a
22 specialized WC-135R aircraft used to detect evidence of
23 nuclear detonations. And how will this conversion, I guess,
24 help to improve the WC-135R mission?

25 General Goldfein: It allows us to give more time to be

1 able to continue to accomplish this mission because the
2 current airplanes are old. They are wearing out. Our
3 mission-capable rates and, more importantly, our aircraft
4 availability rates to be able to do this mission are much
5 lower than not only the Secretary of Defense but the
6 combatant commanders require under that mission. So being
7 able to convert this into the KC-135 gives us more longevity
8 for that critical mission.

9 Senator Fischer: Thank you.

10 And I would also like to thank the dedicated men and
11 women that we have at the 55th wing and the missions that
12 they perform.

13 Madam Secretary, the Air Force's physical
14 infrastructure is essential to the lethality and the
15 readiness of our nation's forces, both key goals of the NDS.
16 Put simply, maintaining readiness means maintaining our
17 runways. Unfortunately, there are several instances where
18 Air Force installations are operating with runways in
19 increasing states of deterioration and in need of
20 substantial repair. Offutt in my home State of Nebraska is
21 one such example. And while I am encouraged that the Air
22 Force is working on a planned solution, I do worry about
23 this in a systemic sense as an issue.

24 To what degree do you believe the Air Force is
25 experiencing a larger runway maintenance problem?

1 Dr. Wilson: Senator, I have actually stood on that
2 runway and seen some of the problems with the concrete
3 there. And it did not last to the extent it was supposed
4 to. And as the engineers there know and as you know, there
5 were problems in the way they built that runway, and it is
6 going to have to be replaced earlier than it should have
7 been. We do not see that as a systemic problem across the
8 Air Force. I think it was a problem with that contractor.

9 Senator Fischer: I thank you for your interest and
10 your commitment to the runway at Offutt. And I thank you
11 for coming to stand on the runway. It is important to see
12 that firsthand, the issues that our airmen are facing there.

13 What system do you have in place to monitor the risk
14 that is posed to installations, though, as a result of any
15 kind of degradation to the runways?

16 Dr. Wilson: Senator, we have civil engineers who are
17 at our bases who monitor the condition of the runways and
18 other critical facilities.

19 Senator Fischer: And do you believe that is sufficient
20 to mitigate any risk?

21 Dr. Wilson: Senator, I do, but I can also kind of take
22 that for the record and go back and push on that a little
23 bit, if you would like me to.

24 [The information follows:]

25 [COMMITTEE INSERT]

1 Senator Fischer: Okay. I thank you very much, and I
2 appreciate your support for us. Thank you.

3 Senator Inhofe: Thank you, Senator Fischer.

4 Senator Heinrich?

5 Senator Heinrich: Thank you, Chairman.

6 Secretary Wilson, General Goldfein, welcome to you
7 both.

8 I wanted to ask you a little bit about the plans by the
9 Air Force to divest of its HH-60G Pave Hawks as the new
10 Whiskey models become available. The entire New Mexico
11 delegation wrote to you a few months ago and expressed
12 support for transitioning some of those legacy helicopters
13 to the 150th Special Operations Wing. Doing so would help
14 the Air Force with pilot production but also help alleviate
15 the stress on the 58th Special Operations Wing to train both
16 the legacy and the new airframes.

17 So as the Air Force upgrades to the HH-50W combat
18 rescue helicopter, would you agree that an interim location
19 using the legacy airframe would be beneficial to that
20 transition? For either of you.

21 General Goldfein: Yes, sir. And we appreciate that
22 option and we are looking into it. So we do agree.

23 Senator Heinrich: I would very appreciate it if you
24 would look at the New Mexico Air National Guard as having
25 the potential to fill that role.

1 Secretary Wilson, I was really encouraged to see the
2 Air Force prioritization on modernization in this year's
3 budget. It is a very welcome focus.

4 I am, however, concerned that it is not necessarily
5 adequately reflected in the basic and applied research
6 accounts, which is really the foundation for a lot of the
7 defense labs. So the fiscal year 2019 budget request
8 increases RDT&E by almost 19 percent, but the basic and
9 applied research lines stayed pretty flat.

10 Do you think we are putting enough emphasis right now
11 on basic and applied research?

12 Dr. Wilson: Senator, I actually share your concern.
13 Our research, development, test, and evaluation did go up
14 significantly in this budget, but it is more on the test and
15 evaluation end of things. We have a science and technology
16 strategy review underway to help identify what are the areas
17 where the Air Force needs to focus for the future and how
18 can we best conduct that research. We expect that review to
19 be done this fall and into the end of the year, and that
20 will help guide us with the future.

21 Senator Heinrich: I am very happy to see the focus on
22 RDT&E. I just worry that if we do not pay attention to that
23 foundation that it is going to catch up to us.

24 One of the other things I wanted to ask your opinion
25 on, Secretary, I have long been an advocate for a more

1 resilient and responsive space architecture that allows us
2 to move faster and counter threats that we are facing in the
3 current environment. So I was incredibly pleased to see
4 that the Space Rapid Capabilities Office received such
5 priority in resources in this year's budget request.

6 Can you just talk a little bit about the importance of
7 this newly designated office, Space Rapid Capabilities, and
8 how it is going to contribute to our nation's resilience and
9 fit into the overall architecture?

10 Dr. Wilson: Senator, the Operationally Responsive
11 Space Office has been renamed the Space RCO. There are four
12 different satellites that that office is working on now.

13 But I think even more than just renaming the office, we
14 have been going through a series of sprints with the Space
15 and Missile Systems Center since December of 2 and 3 weeks
16 in duration to look at how do we buy satellite systems, how
17 do we need to change the way in which we buy satellite
18 systems. There are a number of results of that work, but
19 one of them will be to robust or strengthen the Space Rapid
20 Capabilities Office to be able to drive forward on
21 prototyping and rapid responses to combatant commander
22 needs.

23 Senator Heinrich: Great.

24 General Goldfein, I wanted to ask you a little bit
25 about light attack aircraft. You recently announced that

1 the Air Force will undergo another experiment at Holliman
2 this year rather than the originally planned combat
3 demonstration. How is this experiment going to be different
4 than the one conducted at Holliman last year?

5 General Goldfein: Sir, three ways.

6 Number one, we are taking a really deep dive on this
7 one on the sustainment aspects of it, how many maintainers
8 we need, how we sustain them both at home and forward. We
9 determined that we could actually get a better outcome by
10 not doing a combat experience downrange but doing an
11 experiment at Holliman Air Force Base like we did the last
12 time.

13 Second, we are looking at this through the lens of
14 allies and partners because a big part of the light attack
15 experiment is a common architecture and information and
16 intelligence sharing network so that those who would join us
17 would be able to be part of the counter-violence, the
18 campaign against violent extremism.

19 And the third thing that we are looking at is how do we
20 integrate this particular weapon system in ways that allows
21 us to get to a price point where those that we are affecting
22 in the fight against violent extremism for the long term,
23 that we are able to do that in the \$2,000 per flying hour
24 range over time as opposed to the \$20,000, \$30,000, \$40,000
25 per flying hour range. Given the fact that we are going to

1 be in this for a long time, it is why it has been in the
2 National Defense Strategy.

3 So as we go look at this, we are hopeful that we will
4 get the outcomes that will allow us possibly to come back to
5 you and look at even accelerating this to the left if, in
6 fact, we think that is worth pursuing.

7 Senator Heinrich: I look forward to that. It has
8 taken quite a long time to get this moving. So we are
9 looking forward to seeing that capability fielded.

10 Thank you, Chairman.

11 Senator Inhofe: Thank you, Senator Heinrich.

12 Senator Rounds?

13 Senator Rounds: Thank you, Mr. Chairman.

14 Secretary Wilson, General Goldfein, first of all, thank
15 you for your service to our country.

16 Secretary Wilson, you said that if you currently have a
17 bomber base, you will be getting the B-21. We are very
18 happy with that decision, and we are looking forward to
19 getting the B-21 at Ellsworth Air Force Base. The aircraft
20 is expected to arrive in the mid-2020s, which is only about
21 7 years away. To prepare for the arrival, there are
22 significant amounts of work that have to be completed. The
23 MILCON work that would have to be done is going to take some
24 time.

25 I have just got a couple of questions with regard to

1 what the planning is for this particular movement.

2 It is my understanding that the Air Force still must
3 complete the strategic basing process in order to make the
4 B-21 basing decision official. Am I correct in that
5 assumption? And when would this be done?

6 Dr. Wilson: Senator, you are correct that if you have
7 a bomber base now, you will have a bomber base in the
8 future. We expect a minimum of 100 B-21's, as a minimum.
9 The rest of the fleet will be B-52's. The Chief has also
10 directed a review of the entire number of squadrons that we
11 have of all kinds of aircraft in light of the National
12 Defense Strategy, which should be done by the end of August.

13 We would not expect to move forward with a strategic
14 basing initiative in the near term honestly because this is
15 still 7 years out or so. If we get a validation of numbers,
16 I suppose we could move forward earlier on it, but there is
17 really probably not a need to move on it for another couple
18 of years at least.

19 Senator Rounds: That is the reason for my question.
20 It would appear to me that with the amount of work, the
21 military construction that is going to have to be done and
22 the fact that it is going to have to move through an
23 appropriations process, it seems to me that there would be
24 at some point a plan in which the MILCON would start to
25 become a part of that process. That is really what my

1 question is. How soon would it be before we expect to see
2 the Air Force making recommendations with regard to MILCON
3 activity for these improvements in those bases in order to
4 be able to receive the B-21 in a timely fashion?

5 Dr. Wilson: Senator, it is not on my radar screen now
6 for the basing actions that we expect in the near term. So
7 the B-21 will start coming on in the mid-2020s and then
8 there is a ramp-up after that. I will take this under
9 advisement as to whether we should move this forward to give
10 communities some certainty.

11 But I do not know. Chief, do you have anything on the
12 bomber structure, the force structure?

13 General Goldfein: Yes, ma'am.

14 So, sir, what I would just offer is that if you look at
15 our MILCON submission in this budget, our priority starts
16 with new mission MILCON and then we go to combatant
17 commander critical requirements, and then we get to what we
18 call worst first, those worst facilities that we have got to
19 build across all of the major commands. So the top of our
20 submission is in new mission beddown. So that is why you
21 see MILCON going in on the F-35, MILCON going in on the
22 KC-46. So the process that we use to align that MILCON with
23 new mission to ensure that it is in place before the
24 aircraft arrive because you have got to go do the
25 maintenance and sustainment of the weapon system before you

1 actually operate it, that same process will be used for the
2 B-21.

3 Senator Rounds: So what I am hearing you say is that
4 because of the time frame and you have got other items such
5 as the 135 that has got to bed down first, and that is where
6 your priority is going to be or the next couple years with
7 regard to the MILCON mission. Am I saying that correctly?

8 Dr. Wilson: Senator, we generally do not plan MILCON
9 outside of the 5-year window. And so this is for us beyond
10 the 5-year window of where we would be planning.

11 Senator Rounds: Today just now, once again, we have
12 used the term that we would have a minimum of 100 B-21's, or
13 at least that is the structure today. Is it not about time
14 that we really started talking about what our needs are and
15 about what the real discussion should be?

16 I understand that when we are talking about 100
17 aircraft, there is a cost involved because on a per-copy
18 basis, the more you build, the less expensive per copy it
19 can become. And the sooner you have certainty with regard
20 to that, perhaps the better off we all are in terms of how
21 we budget for it. Is it not fair to say that under most
22 analyses that have been done, we are somewhere between 170
23 and 200 B-21's or at least that number of bombers necessary
24 to fulfill the missions as you currently understand them?

25 General Goldfein: Yes, sir. And that is why I have

1 directed the study that will be done by August on exactly
2 what the size of the Air Force needs to be, bombers,
3 fighters, command and control, personnel recovery, all those
4 elements that we bring to do the missions of the Air Force.

5 The National Defense Strategy -- the Secretary said we
6 were on version 67. We had folks that were helping the
7 Secretary of Defense with the writing of that document. We
8 were getting periodic updates, and we were looking at the
9 2019 budget throughout that time frame.

10 And so as we look forward to the future, we owe you now
11 what the size of the Air Force needs to be to be able to
12 accomplish the National Defense Strategy tasks, and that is
13 where we will come back to you with telling you what the
14 requirement is for the force of bombers we need. Right now,
15 what we know is the minimum is 100. I fully expect that the
16 requirement is going to be above that.

17 Senator Rounds: Let me, just for the record, ask you
18 once again just so that I understand it. When would you
19 expect to be able to come back to the committee with a
20 recommendation as to what our force should look like?

21 General Goldfein: Our plan is to do that by August.

22 Senator Rounds: Thank you.

23 Thank you, Mr. Chairman. My time has expired.

24 Senator Inhofe: Thank you, Senator Rounds.

25 Senator Peters?

1 Senator Peters: Thank you, Mr. Chairman.

2 And to our witnesses, thank you for your testimony here
3 today as always.

4 Secretary Wilson, when you appeared before this
5 committee in December, you said you are -- and I am going to
6 quote you here -- a big fan of the A-10, which I certainly
7 like to hear. But I am concerned because a significant
8 number of A-10's will have to be grounded unless they
9 receive new wings. So that is a big concern. And the Air
10 Force's fiscal year 2019 budget request included \$80 million
11 for additional wing sets for the A-10. But last week in the
12 Airland Subcommittee, we heard testimony that the Air Force
13 has only committed to maintaining a minimum of six of the
14 nine A-10 squadrons through 2032.

15 Secretary Wilson, could you please clarify the Air
16 Force's intent for the future of the A-10, and has there
17 been a decision made to reduce from nine to six?

18 Dr. Wilson: Senator, there has been no decision to
19 reduce from nine to six. The current fiscal year's budget
20 includes the funds to restart the line for the rewinging of
21 the A-10 and to buy the first four wing sets. The fiscal
22 year 2019 proposal has \$80 million, which should get us
23 somewhere between 8 and 12 additional wing sets. Earlier
24 this week, I asked our acquisition folks to see whether that
25 production can be accelerated for delivery so that we do not

1 have groundings, and they are taking a look at that. But
2 there has been no decision made to reduce the number of A-10
3 squadrons.

4 Senator Peters: And is that decision based on current
5 funding, or will you require additional appropriations in
6 fiscal year 2019 above the budget request for the A-10?

7 Dr. Wilson: Senator, we have the money in the budget
8 request I think for between 8 and 12 additional wing sets.
9 We have not gotten the final proposals and made a decision
10 to be able to analyze how many wing sets per year is the
11 maximum that industry could produce, but I may be able to
12 get that information to you.

13 Senator Peters: I would appreciate that, if you could,
14 Secretary.

15 Dr. Wilson: Yes, sir.

16 Senator Peters: You mentioned the contract. Could you
17 please provide an update on the competition for the A-10
18 wing contract? I know there were some issues in the supply
19 chain. Do you expect any issues in the industrial base to
20 delay this program?

21 Dr. Wilson: Senator, I do not expect any now, but it
22 is a good example of supply chain problems. The prime
23 contractor for the A-10 no longer exists. North American
24 was the aircraft producer at the time. And there are, as I
25 understand it, 102,000 parts on an A-10 wing. So I do not

1 know how many of those are different part types, but I am
2 hoping a lot of them are the same rivet. But it is a
3 complicated wing.

4 Senator Peters: Right.

5 With disruptive technologies making it easier and less
6 expensive to put satellites in orbit, we are likely to see
7 the beginning of a satellite boom. Several companies have
8 applied for and received licenses to launch large satellite
9 constellations in the next 20 years. Recently, as you know,
10 SpaceX was approved to launch a constellation of more than
11 4,000 satellites to provide rural broadband, certainly a
12 very important issue for the United States, but one
13 particularly important for me and for northern Michigan in
14 the upper peninsula of Michigan. But needless to say, space
15 situational awareness or space traffic management is going
16 to become far more complicated in the upcoming years.

17 Recently Vice President Pence, as the head of the
18 National Space Council, announced that the Department of
19 Commerce will become responsible for a basic level of space
20 situational awareness using data provided by the Air Force.
21 However, I am personally concerned that the orbital debris
22 regulatory landscape is already extremely complicated, and
23 adding a new organization in the Department of Commerce
24 would probably only add to that complexity.

25 So my question to either one of you is, what steps do

1 you recommend to improve our whole-of-government approach to
2 space situational awareness? And what role specifically
3 should the Air Force play, and what other agencies and
4 departments do you want to see in leading roles?

5 Dr. Wilson: Senator, a number of questions there.

6 The Air Force has been doing notification of possible
7 collisions in space since the 1950s, not only for the United
8 States but for the world and for companies. We track any
9 object greater than about a softball size, and there are
10 20,000 of those currently orbiting the earth. Last year our
11 group out of Annenberg, California gave notice of about
12 300,000 potential collisions in space.

13 We are increasing our space situational awareness
14 capabilities. We have four satellites on orbit. We will
15 put two more satellites on orbit for co-orbital space
16 situational awareness, but we also have a ground-based
17 system to be able to watch things and not just keep a
18 catalogue, but to be able to see things in near real time.
19 So if anything is moving, we figure out why, and we are able
20 to protect our assets on orbit.

21 With respect to who we cooperate with, I had a meeting
22 last week with the Secretary of Commerce. They are going to
23 come out to our Schriever wargame this fall, and we will
24 have a civil cell there so they can start to learn how we do
25 this now. We are quite happy to move that to the Commerce

1 Department and stand up their capability. The sensors will
2 probably all come from us, but there may be some advantages
3 to having the Commerce Department doing this as well. There
4 are other sources of data on space situational awareness,
5 and they may be able to do some things that, honestly, right
6 now we just -- our sensors track and we notify off of our
7 sensors. They may be able to do some additional things
8 based on other people's data sets, and that may be an
9 advantage for all of us.

10 Senator Peters: Thank you so much.

11 Senator Inhofe: Thank you, Senator Peters.

12 Senator Cotton?

13 Senator Cotton: Thank you, Mr. Chairman.

14 Madam Secretary, General Goldfein, thank you for being
15 here today. I am sorry I am late. I just came from the
16 White House arrival ceremony for President Macron. I will
17 say that your Air Force platoon performed excellently,
18 almost as good as the Army platoon.

19 [Laughter.]

20 Senator Cotton: Secretary Wilson, we passed a 2-year
21 budget a couple months ago and an omnibus spending bill for
22 the rest of this year. Obviously, that has given a bit of a
23 reprieve from the budget caps and sequestration under the
24 Budget Control Act. However, we still have to implement the
25 second year of that budget agreement.

1 Could you explain to me the impacts that continuing
2 resolutions have had on the Air Force and why it is
3 important that we pass a DOD appropriations bill in a timely
4 fashion this summer?

5 Dr. Wilson: Yes, sir. Senator, I think that nothing
6 has done more damage to the United States Air Force than
7 budget uncertainty or sequester over the last decade. And
8 certainty allows us to do things like work with industry to
9 maximize the munitions production up to industry capacity.
10 It allows us to sign contracts other than in the last half
11 of the year. So probably the most important thing is
12 industry certainty. We have not sequestered ourselves this
13 year. We have acted as if the budget was ultimately going
14 to be passed, but the uncertainty with industry is a major
15 issue.

16 Senator Cotton: Thank you.

17 And then, of course, we will be back in this situation
18 in about 18 months because the last 2 years of the Budget
19 Control Act, fiscal years 2020 and 2021, remain. I assume
20 that it is imperative that Congress act to eliminate those
21 caps and the risk of sequestration for the same reasons for
22 those two fiscal years?

23 Dr. Wilson: Yes, sir.

24 Senator Cotton: Thank you.

25 The Air Force's unfunded priorities list states that

1 the ground-based strategic deterrent and long-range standoff
2 weapon programs are both expected to run out of funding by
3 the end of the year due to accelerated timelines. Please
4 explain a little bit more about the acceleration of the
5 timelines of those programs.

6 Dr. Wilson: Senator, they are ahead of schedule. They
7 are making very good progress and they are ahead of
8 schedule.

9 Senator Cotton: So that is a good news story then, not
10 a bad news story.

11 Dr. Wilson: Yes, sir.

12 Senator Cotton: Thank you.

13 What impact, if any, would the Air Force face on these
14 programs if it does not receive the extra funding that is
15 identified in that unfunded priorities list?

16 Dr. Wilson: Senator, our unfunded priorities list this
17 year, because of the increase in the money that the Congress
18 appropriated in the budget deal, is actually smaller than it
19 has ever been, at least in probably the last decade. But
20 what we did in those unfunded priorities, which we are
21 required by statute to provide, is accelerate things that
22 are already in our 5-year plan. So pull more things to the
23 left if there were an additional top line.

24 We are actually executing on the nuclear modernization,
25 on the research and development phase of that faster than we

1 thought, and that would be a good place to keep the progress
2 going.

3 Senator Cotton: Thank you.

4 General, how many fighter aircraft does the Air Force
5 have today?

6 General Goldfein: Sir, currently we have 2,151
7 aircraft.

8 Senator Cotton: How many are combat-coded?

9 General Goldfein: Approximately 75 percent of those.

10 Senator Cotton: A little over 1,500 then?

11 General Goldfein: Yes.

12 Senator Cotton: So you are in compliance with the NDAA
13 provision from a couple years ago --

14 General Goldfein: We are.

15 Senator Cotton: -- to maintain a minimum of 1,900
16 aircraft and 1,100 combat-coded.

17 Does the new National Defense Strategy have any impact
18 on what our requirements are today for both total aircraft
19 and combat-coded aircraft?

20 General Goldfein: It does, and in fact, we are going
21 to be coming back to this committee by August with our
22 assessment of not only the number of aircraft, but more
23 importantly, the number of squadrons that are required, not
24 only with fighters but with fighters, bombers, command and
25 control, personnel recovery, all those elements that are

1 required to successfully support the National Defense
2 Strategy.

3 And to the previous discussion on A-10, we discussed
4 earlier that we have gone from 134 fighter squadrons to 56.
5 One of the reasons that the Secretary and I are looking at
6 all of those fighter squadrons is because the last thing we
7 want to do right now is get smaller. We need to work with
8 this committee to get larger and make sure that we can
9 source the number of airframes, the maintainers, the people
10 in the squadrons we need to adequately support the strategy.

11 Senator Cotton: Thank you, General.

12 And, Madam Secretary, thank you for your visit to
13 Arkansas to sit with our National Guard and Little Rock Air
14 Force Base.

15 Senator Inhofe: Thank you, Senator Cotton.

16 Senator Hirono?

17 Senator Hirono: Thank you, Mr. Chairman.

18 Secretary Wilson, peace and stability in the Indo-
19 Pacific is essential. I am glad that you are paying a lot
20 of attention to the region given its importance.

21 You made some recent visits to the region, which also
22 included a stop in Hawaii where you discussed recognizing
23 that we have returned to an era of great power competition
24 and that adversaries in the Indo-Pacific area are rapidly
25 modernizing and we need to keep pace in this highly

1 contested region to ensure our national security.

2 And from your visits, as well as your thinking about
3 the region, being the Indo-Pacific region, what concerns you
4 most as Secretary of the Air Force?

5 Dr. Wilson: Senator, what concerns me most is the pace
6 of innovation of China and their rapid growth in their
7 military capabilities.

8 Senator Hirono: So do your budget requests reflect
9 recognition that you have a concern and that we are stepping
10 up in terms of our pace of modernization acquisitions?

11 Dr. Wilson: Senator, I think it does.

12 Senator Hirono: Do you believe additional assets and
13 investments are needed for the Air Force to maintain its
14 competitive advantage against our adversaries in the Indo-
15 Pacific region? If so, in what areas?

16 Dr. Wilson: Senator, we have put an unfunded
17 priorities list together that would accelerate things
18 faster. I would say that one of the things we are trying to
19 do in the Air Force is to accelerate the pace of
20 acquisition, to do more prototyping, more experimentation,
21 to use the authorities that this committee has given us to
22 get to capability faster, from the lab bench to the flight
23 line faster. And I think you have given us a lot of
24 authorities. We now have to execute on those authorities.

25 Senator Hirono: You talk about your concern, the pace

1 of innovation of China. So in what areas are they
2 innovating that causes you great concern? General?

3 General Goldfein: Ma'am, I will talk first and
4 foremost about some of the work they are doing in space. It
5 is very aggressive. And we built our space architecture in
6 an era where space was a rather benign domain, and so as the
7 Secretary has laid out, we are very focused and taking some
8 bold moves in this budget to increase our ability to defend
9 what we have in space. And I would also tell you that in
10 areas of hypersonics, in the areas of some of the game-
11 changing technologies that we have investments in, we are
12 also watching very clearly what China is investing in the
13 same.

14 Senator Hirono: What about Russia? Are they not
15 investing in the space domain?

16 General Goldfein: They are investing, but they do not
17 have the economic base that China has to be able to advance
18 as quickly.

19 Senator Hirono: General, you are an advocate of Air
20 Force readiness consistently testifying on its importance.
21 And I also believe in the importance of readiness for our
22 airmen.

23 This March, I visited the Guard unit at Joint Base
24 Pearl Harbor-Hickam, where I revisited a readiness challenge
25 that I have been working on with Air Force leadership for a

1 number of years now. And the challenge involves adversary
2 air capability. And you are nodding because I think you are
3 familiar with the situation in Hawaii. There the Guard unit
4 is forced to go F-22 against F-22 in many cases. Unlike
5 other bases, Joint Base Pearl Harbor-Hickam does not have
6 T-38's or aggressor squadrons that are there to conduct
7 adversary air operations. I understand that the Air Force
8 is looking at some commercial solutions for adversary air,
9 and of course, I would like to see T-38's or other
10 aggressors based at Joint Base Pearl Harbor-Hickam as a
11 future goal.

12 But in the meantime, as you work the new contract
13 adversary air capability, are there other solutions being
14 considered?

15 General Goldfein: Ma'am, primarily we are looking at
16 this from a contract solution for Hawaii specifically. I
17 will tell you this is a home station training challenge.
18 When those squadrons deploy to a Red Flag to Alaska and to
19 other areas, they are able to actually then train against a
20 robust adversary. When they train in the simulator, they
21 are able to train now against a rather robust adversary.
22 This is about filling that gap for daily home station flying
23 training. And the primary vehicle we are looking to fill
24 that gap is through a contract.

25 Senator Hirono: So you are telling me that you are

1 making progress so that our airmen do not have to go F-22
2 against F-22 because that is not the way we would like to
3 use our resources.

4 General Goldfein: Less than optimum, yes, ma'am.

5 Senator Hirono: One more question to both of you. I
6 know you often have to wave priorities and readiness,
7 modernization, and additional capabilities versus MILCON.
8 In your recent MILCON fiscal year 2019 budget request, the
9 Air Force states that MILCON investments support the
10 combatant commanders' highest construction priorities such
11 as the posture of forces in Europe and Indo-Pacific
12 resiliency. I am encouraged by the prioritization of MILCON
13 investments in the Indo-Pacific region in support of your
14 mission.

15 Can you discuss very briefly the importance of MILCON
16 investments to improve your capabilities to deter our
17 adversaries in the Indo-Pacific region? We will just go
18 with you, Secretary Wilson.

19 Dr. Wilson: Senator, I take a point, and it is a
20 priority not just to put MILCON in the Pacific but to pursue
21 agile basing in the Pacific and the ability to move in
22 unpredictable ways in a crisis and disperse forces.

23 I would say that our budget -- when we look at the
24 actual numbers, the way things fell out, we may have
25 overemphasized the European Defense Initiative a little bit

1 and possibly underemphasized what we are doing in the
2 Pacific Security Initiative a little bit. And that seems to
3 show up on the agile basing issue.

4 Senator Hirono: But because of your understanding of
5 the importance of the Indo-Asia-Pacific area to our national
6 security, you are placing more emphasis on what we need to
7 be doing there.

8 Dr. Wilson: Yes, Senator.

9 Senator Hirono: Thank you.

10 Thank you, Mr. Chairman.

11 Senator Inhofe: Thank you, Senator Hirono.

12 Senator Ernst?

13 Senator Ernst: Thank you, Mr. Chair. Thank you very
14 much.

15 General Goldfein, thank you for mentioning Iowa,
16 Colonel Bud Day. He is gone but will never be forgotten.
17 He really is a true hero to so many of us.

18 Secretary Wilson, thank you very much for your service.
19 It is good to have you in front of the committee.

20 I am going to start with an issue that has been very
21 important to me and for our aviators, something that I
22 continue to be concerned about, the physiological episodes
23 that our aviators experience. And it is burdening not just
24 the Navy but our Air Force pilots as well.

25 In March alone, we have 12 episodes that were reported

1 amongst the T-6 trainer aircraft fleet. And last week
2 during the Navy hearing, Secretary Spencer provided an
3 update to the committee on some of the efforts that the Navy
4 and the Air Force have undertaken to solve this problem. As
5 I told him, the fact that we have not been able to find the
6 root cause is very disturbing.

7 Secretary, do you have any updates for the committee
8 from the Air Force's perspective?

9 Dr. Wilson: Senator, we are working with the Navy and
10 with NASA, as well as with different elements of the Air
11 Force, to try to bear down on a root cause and figure these
12 out. The most recent incidents have been with the T-6,
13 which both the Navy and the Air Force fly. We pulled all of
14 ours off the line, took out those systems, rebuilt the
15 systems. We now have over 270 of them back flying, but we
16 have experienced some other incidents.

17 We have, in recent weeks, set up a safety investigation
18 board which for the Air Force has the advantage of being
19 able to get information without consequence. And we have
20 used that mechanism in the Air Force in the past to get more
21 information from the pilots, the maintainers, try to really
22 figure this out.

23 Chief, do you want to add anything on this one?

24 General Goldfein: Ma'am, I will just tell you just to
25 give you a sense of how serious we took it, we stood the

1 whole fleet down. And I was involved in that discussion, as
2 you might imagine. We just had too many that we could not
3 connect to one particular causal effect. So when we pulled
4 those off, we put a team of engineers, operators,
5 physiologists, brought the Navy in, brought NASA in to
6 really drive in. So although we have fairly high confidence
7 that we have identified the highest brake rate items that
8 could contribute, we do not have the smoking gun yet. And
9 we are not going to stop until we find it.

10 Senator Ernst: And I appreciate that. I know we have
11 talked about in the past monitoring the oxygen that is
12 exiting the system and also perhaps what is coming out of
13 the aviators as well. So monitoring the levels.

14 I know we are studying equipment and potential
15 equipment malfunctions. You mentioned physiologists. Are
16 we examining the pilots as well and conducting surveys of
17 the pilots? Maybe are they drinking too much coffee in the
18 morning, you know, just things like that? Is there
19 something that maybe perhaps is going on outside of the
20 realm of the equipment?

21 General Goldfein: Yes, ma'am. And I will just share
22 with you that we learned a lot when we started the F-22 and
23 we were having some very similar issues. And because --
24 pilots, we all grow up and we go to the altitude chamber and
25 we are actually deprived of oxygen so we know what our

1 individual symptoms are. So once we recognize our
2 individual symptoms, we know how to react.

3 And so when we looked at the F-22, we started with an
4 engineering analysis of the F-22, and we were going
5 subsystem by subsystem to try to find it. It was not until
6 we actually looked at the entire ecosystem with the pilot as
7 part of that system that we determined that what we were
8 experiencing was not actually hypoxia, loss of oxygen, but
9 actually hypocapnia, which is a completely different issue
10 but has very similar symptoms.

11 So we are using the same structure of looking at the
12 entire ecosystem of the T-6 with the pilot as a part of that
13 system, and that is why that safety investigation board now
14 is so important.

15 Senator Ernst: Very good. Again, we need to figure
16 out the root cause of the issue looking at all aspects
17 there.

18 Just very briefly, General, during our STRATCOM hearing
19 a few weeks ago, I visited with General Hyten about the need
20 for the United States to really articulate a new space
21 strategy. Our last national security space strategy was
22 published in 2011, and the threats have exponentially
23 increased since then.

24 Can you talk to us, please, about the need to update
25 this national security space strategy?

1 General Goldfein: Yes, ma'am. And I will tell you
2 that the Secretary mentioned the strategic alignment that we
3 have right now from the President to the Vice President, who
4 has stood up the National Space Council, and Secretary
5 Wilson has been very helpful to the Vice President in that.
6 And so from the top leadership of the nation through those
7 of that are entrusted with the mission of space superiority,
8 we have this strategic alignment right now, and the space
9 strategy that the National Security Council is working its
10 way through is going to be very important.

11 Senator Ernst: I appreciate it.

12 My time has expired. Thank you, Mr. Chair.

13 Senator Inhofe: Thank you, Senator Ernst.

14 Senator King?

15 Senator King: Thank you, Mr. Chairman.

16 General Goldfein, I think you have acknowledged
17 previously -- and I think the Secretary has as well -- the
18 excessive operations and sustainment costs of the F-35. The
19 recent estimate is, I think GAO said, \$1 trillion over the
20 lifecycle of the airplane. You are the largest customer on
21 the F-35. What do we need to do to reduce those numbers?
22 And I think a specific question I would ask, could you give
23 me a ratio of sustainment cost for an F-35 versus a fourth
24 generation fighter? Is it twice as much, a third again as
25 much? I just want to get a flavor of what we are talking

1 about here.

2 General Goldfein: Yes, sir. So I will start with the
3 last part of the question first. So our initial estimate
4 right now is that the sustainment costs of the F-35 are in
5 some cases upwards of about two-thirds as much or two-thirds
6 more than what we are finding in a fourth generation
7 fighter. It is why you have seen me on record to say that
8 our target for sustainment costs is equivalent to a fourth
9 generation airplane. We want to get those sustainment costs
10 so that it costs the same amount for an F-35 as we currently
11 fly in an F-16 or an F-18. And that is because those are
12 the airplanes we are replacing, and those are the costs that
13 we have funded in.

14 Senator King: What I would like to ask is if you could
15 give me for the record what you are doing to meet that goal,
16 given the limited time we have here. But that would be very
17 helpful. And are we making progress and how is it played
18 out.

19 [The information follows:]

20 [COMMITTEE INSERT]

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1 Senator King: A different question. Madam Secretary,
2 the Air Force is undergoing its first full audit. The first
3 question, how is it going? Second question, how long do you
4 think till we can get to a place for a clean audit?

5 Dr. Wilson: Senator, the audit so far is going well.
6 The auditors are on board. The Air Force has worked up to
7 this over the last 2 years. So we are kind of going from
8 spring ball into the real season.

9 To me, the value of these audits is identifying things
10 that we need to fix and get better. And so I would expect
11 that it is going to be a while before the Air Force has a
12 completely clean audit.

13 I would say that the things that they are identifying
14 early on as areas of concern or areas of focus are going to
15 be, at least initially, in real property management and
16 accountability there. So we know we are going to have some
17 work there. But as they identify things, we will work on
18 them and get better.

19 Senator King: I would urge you to make this a
20 priority. We are all talking about funding and increasing
21 funding. Some of the pressure I get back home in Maine is
22 they are not even audited. Why should we be spending all
23 this additional money? And I am just saying, as we look
24 forward for the next few years as we are looking toward
25 increasing funding for what amounts to deferred maintenance

1 in many cases, modernization, having that audit or the
2 closer we can get to the real audit will be a defense for
3 you that I think is important.

4 Dr. Wilson: Senator, this is our first full audit this
5 year. So we will have an audit -- this is an audit for the
6 first full year.

7 Senator King: Yes, and I do not think anyone expects
8 it to be a clean audit the first year. The Navy testified I
9 think it would be about 4 or 5 years before they feel they
10 are going to get to a clean audit. But I just wanted to
11 urge you to make that a priority because I think it is part
12 and parcel of our funding decision.

13 Dr. Wilson: Yes, sir.

14 Senator King: It will help us to be able to provide
15 you with the funding that you need if we can tell our
16 constituents they are being audited and we are doing that
17 work.

18 On the pilot shortage, we have got all these
19 projections. And I know it is a very serious problem.
20 Senator Cotton and I had a meeting on that with a group of
21 pilots.

22 What about the effect of UAVs? Will that mitigate the
23 problem 5-10 years from now? I mean, autonomous automobiles
24 are going to change the world in the next 10 years. Is
25 there a greater role there?

1 Dr. Wilson: Sir, our UAVs are remotely piloted, so you
2 still need a pilot there. We have actually recovered and
3 put in place a recovery plan.

4 Senator King: But do those pilots of UAVs have to be
5 -- they do not have to be officers and there is a different-
6 -

7 Dr. Wilson: Senator, for the Global Hawk, we have
8 enlisted pilots. I would say that the pilot retention
9 issues will be the same for enlisted or officers because
10 they can be hired by the airlines. So we face that same
11 issue.

12 We are close to recovery for the remotely piloted
13 aircraft, and we will continue to have the need for
14 pilots --

15 Senator King: Close to recovery. You mean close to
16 where you need to be?

17 Dr. Wilson: Yes, sir.

18 Senator King: So UAV pilots -- we are doing okay.

19 Dr. Wilson: Sir, we had a deficit and we recovered,
20 and part of the way we recovered was there is an insatiable
21 demand for intelligence, surveillance, and reconnaissance.
22 And we told the combatant commanders we can provide 60
23 combat air patrols a day of remotely piloted aircraft. We
24 have got to get to recovery because we were burning out.
25 You know, the pilots were flying remotely 6 days a week, 12

1 hours a day, never a break.

2 Senator King: Well, let me follow up on this question,
3 as I did on my first question. I am out of time. For the
4 record, if you could provide a page summary of the steps
5 being taken to remedy the pilot shortage --

6 Dr. Wilson: Yes, sir.

7 Senator King: -- what is being done, what is working,
8 what is not working. The conclusion from the meeting that
9 Senator Cotton and I had was that it was not necessarily
10 about bonuses. It was more about we have got pilots that
11 want to be pilots, and they do not necessarily want to be
12 moved into the path toward leadership. They want to fly
13 airplanes. So anyway, I would like to see a little write-up
14 on exactly how you are addressing this issue.

15 Dr. Wilson: Senator, I am happy to.

16 [The information follows:]

17 [COMMITTEE INSERT]

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1 Senator King: Thank you.

2 Thank you very much, Mr. Chairman.

3 Senator Inhofe: Thank you, Senator King.

4 Senator Sullivan?

5 Senator Sullivan: Thank you, Mr. Chairman.

6 And I just want to first commend General Goldfein,
7 Madam Secretary. Your leadership -- I think it raises a
8 broader issue. You know, there has been a strong bipartisan
9 approach to national security, foreign policy nominees and
10 confirmations. General Goldfein, you were nominated by
11 President Obama, and I think President Obama did a great job
12 in nominating outstanding admirals and generals to run our
13 military services. And I think both of you are doing an
14 outstanding job, and I just want to commend you. Madam
15 Secretary, you have been responsive. I know you are meeting
16 with some of my constituents tomorrow. I appreciate that.

17 There is a broader point here, though. I certainly
18 hope my colleagues on both sides of the aisle here recognize
19 this is really a historic, important tradition in the United
20 States where Presidents put forward exceptional individuals,
21 whether it is the Secretary of State or the Secretary of
22 Defense. It might not have been the person we would have
23 chosen if we were President, but they are still good people.
24 On the issue of Mr. Pompeo, I certainly hope we do not have
25 a really partisan vote here. That would be I think

1 unfortunate and moving in dangerous territory.

2 You two are an example of an Obama nominee, a Trump
3 nominee, strong support on both sides of the aisle, both
4 doing an outstanding job, and I just want to commend you for
5 that.

6 But I emphasize the broader point. We cannot go into
7 the dangerous territory of full-blown partisanship when
8 there are good people on both sides of being nominated.

9 Both of you know that I have taken a lot of interest in
10 the OCONUS basing of the KC-46. General, you know that
11 prior to your confirmation, I sent you a letter on that and
12 got some commitments from you. Importantly, in the NDAA in
13 both 2017 and 2018, this committee and the Congress put
14 forward kind of characteristics that they thought would be
15 important. I am going to review a few of those, and if you
16 can just say yes or no. I would like to get your sense.

17 So on the OCONUS selection, do you think it is
18 important, if possible, to have the KC-46's located near not
19 just one but several COCOMs? Can you just quickly answer a
20 yes or a no?

21 General Goldfein: Yes.

22 Senator Sullivan: Madam Secretary, I know you are
23 going to be part of that.

24 How about collocated near outstanding training
25 facilities with joint and international partners?

1 Dr. Wilson: Yes, sir.

2 General Goldfein: Absolutely.

3 Senator Sullivan: How about sufficient airfield and
4 airspace available? I am paraphrasing the NDAA. This is
5 the law. Two NDAAs.

6 Airspace availability and capacity to meet KC-46
7 refueling requirements?

8 Dr. Wilson: Yes, sir.

9 General Goldfein: Yes.

10 Senator Sullivan: How about collocated near facilities
11 that have runways, hangars, aircrew and maintenance
12 operations, and very large fuel storage and distribution
13 capabilities?

14 Dr. Wilson: Yes, sir.

15 Senator Sullivan: How about collocated where there are
16 dozens, over 100, fifth generation fighters?

17 Dr. Wilson: Sir, I am not so sure on that one. I am
18 not sure I would put that in a criteria for a base.

19 Senator Sullivan: For basing of air refueling
20 aircraft? I am not talking about a base. I am just talking
21 about the OCONUS location of the KC-46. You would not put
22 it next to the place --

23 Dr. Wilson: Sir, I am not sure on that one. If
24 somebody gave me the criteria for selection, I am not sure
25 that one, collocation with over 100 fighters, would be one

1 of the criteria.

2 Senator Sullivan: How about collocation to where most
3 aircraft from the Lower 48 going to the Asia-Pacific fly
4 over?

5 General Goldfein: Sir, what I think what you are
6 driving at is this idea of mission synergy which we do
7 factor into every one of our basing decisions, which is how
8 do we get to a point where what we placed there -- you know,
9 one plus one equals three because you are actually able to
10 get the synergy of the mission. And so in that regard, I
11 agree.

12 Senator Sullivan: I am summarizing, but these are all
13 characteristics in the law. I just hope you take those very
14 seriously as you committed in your confirmation, General,
15 you would.

16 Let me ask one final question kind of switching topics
17 here.

18 In your personal opinion, do the Chinese or Russian
19 cruise missiles that are being developed and they have now
20 present a significant to U.S. air bases in the European and
21 Indo-Asia-Pacific theater, including installations in Alaska
22 like JBER or Eielson or Fort Greeley?

23 General Goldfein: I am concerned, Senator, but I am
24 also confident, as others before me have testified, that we
25 have what we need to defend the nation at this time.

1 Senator Sullivan: So you think the Army is capable to
2 provide you the Air Force and the bases that you are in
3 charge of globally with sufficient short-range air defense
4 systems to defend overseas air bases?

5 General Goldfein: I believe the Army has -- and I
6 cannot speak for my fellow joint chief, General Milley, in
7 terms of what is in his budget submission, but I will tell
8 you that I know the Army is invested and committed to their
9 responsibility for base defense.

10 Senator Sullivan: But not just ballistic missile. I
11 am talking cruise missile.

12 General Goldfein: Right.

13 Senator Sullivan: Madam Secretary, do you have a view
14 on that?

15 Dr. Wilson: Senator, I do think that when it comes to
16 air base defense, that is an area where we probably need to
17 look really carefully. It is one that long term I think all
18 of us as airmen have concerns about. Are we going to be
19 able to defend the bases from which we fight?

20 Senator Sullivan: Thank you, Mr. Chairman.

21 Senator Inhofe: Thank you, Senator Sullivan.

22 Senator Gillibrand?

23 Senator Gillibrand: Hi, General Goldfein. Hi, Madam
24 Secretary. Thank you so much for being here.

25 General Goldfein, in the last 2 weeks, General Milley,

1 General Neller, and Admiral Richardson have told me that
2 they have seen zero reports of issues of cohesion,
3 discipline, and morale, as a result of open transgender
4 service in their respective service branches. Are you aware
5 of any specific issues of unit cohesion, disciplinary
6 problems, or issues of morale resulting from open
7 transgender service members in the Air Force?

8 General Goldfein: Not the way you have presented the
9 question, ma'am, I am not. I will tell you that I have
10 talked commanders in the field, first sergeants, senior
11 NCOs, and I am committed to ensure that they have the right
12 levels of guidance to understand these very personal issues
13 that they are dealing with. And so we continue to move
14 forward to ensure that we understand the issues.

15 Senator Gillibrand: And have you personally met with
16 transgender service members?

17 General Goldfein: Yes, ma'am, I have.

18 Senator Gillibrand: And what did you learn from those
19 meetings?

20 General Goldfein: A combination of, one, commitment to
21 serve by each of them, and then number two, how individual
22 each particular case is. It is not a one-size-fits-all
23 approach. It is very personal to each individual. And that
24 is why I go back to we have an obligation to ensure that we
25 understand this medically and that we can provide our

1 commanders and supervisors the guidance they need to be able
2 to deal with this so we do not have issues.

3 Senator Gillibrand: Thank you.

4 Secretary Wilson, on April 3rd, 2018, the American
5 Medical Association wrote a letter to Secretary decrying the
6 recent policy released by the White House. Echoing concerns
7 raised by the American Psychological Association and two
8 former Surgeon Generals, the American Medical Association
9 said, quote, we believe there is no medically valid reason,
10 including a diagnosis of gender dysphoria, to exclude
11 transgender individuals from military service. The memo
12 mischaracterized and rejected the wide body of peer-reviewed
13 research on the effectiveness of transgender medical care.
14 Yet, this DOD panel of experts came to a drastically
15 different conclusion from the preeminent medical
16 organizations in America about gender dysphoria, the
17 effectiveness and impact of gender transition on medical and
18 psychological health, and the ability of transgender service
19 members to meet standards of accession and retention.

20 Do you know who represented the Air Force on this
21 panel?

22 Dr. Wilson: On the advisory panel to the Secretary of
23 Defense?

24 Senator Gillibrand: Yes.

25 Dr. Wilson: Yes, ma'am, I do.

1 Senator Gillibrand: Who?

2 Dr. Wilson: Ma'am, it as our Under Secretary of the
3 Air Force.

4 Senator Gillibrand: And what Air Force health
5 professionals were on the panel?

6 Dr. Wilson: Ma'am, I do not know.

7 Senator Gillibrand: Do you know whether there were any
8 health professionals from within the government and outside
9 of it to testify before or consult with the panel?

10 Dr. Wilson: Ma'am, I do not know who testified or was
11 involved in those discussions.

12 Senator Gillibrand: Can you provide that to the
13 committee, please?

14 Dr. Wilson: I would be happy to provide that.

15 [The information follows:]

16 [COMMITTEE INSERT]

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1 Senator Gillibrand: Thank you.

2 Are you aware of any organizations or people outside of
3 the government who contributed to the work of the panel?

4 Dr. Wilson: Ma'am, I was not involved in the panel.

5 Senator Gillibrand: At any point since your
6 confirmation, have you recommended to the Department of
7 Defense leadership or to the panel of experts on transgender
8 service any change in policy from the guidelines established
9 by Secretary Carter?

10 Dr. Wilson: Ma'am, this is a matter that is in the
11 courts, and I think it is probably best, when things are
12 under litigation, that that process play out. The guidance
13 that the Chief and I have given in the service is that all
14 airmen are to be treated with dignity and respect, and we
15 comply with the court order on accessions, as well as
16 retaining airmen who have disclosed that they are
17 transgender.

18 Senator Gillibrand: Well, the White House has not
19 taken your advice about leaving it to the courts. They have
20 issued policy and they have a panel of experts that have
21 listed a recommendation that is contrary to what the service
22 chiefs have said in terms of good order and discipline and
23 unit cohesion and morale.

24 Dr. Wilson: Ma'am, that is now in the courts, the new
25 recommended policy change. While that is being considered

1 by the courts, the court order that we are under continues,
2 and we continue to assess transgender members in accordance
3 with court order.

4 Senator Gillibrand: Ms. Wilson, recently the Air Force
5 Academy's handling of sexual assault cases made national
6 news. Several current and former cadets recounted their
7 experiences of being assaulted and how they were
8 disbelieved, retaliated against, and denied justice.

9 Since your confirmation as Secretary of the Air Force,
10 what specific actions have you taken to protect survivors at
11 the academy and hold its leadership accountable?

12 Dr. Wilson: Senator, the Sexual Assault and Prevention
13 Office at the academy when through a command-directed
14 investigation shortly before I was confirmed. The Chief and
15 I have made sure that those positions were filled as a
16 matter of priority and worked with the current
17 superintendent of the academy to make sure that other
18 resources were available for sexual assault prevention and
19 response at the academy while they were hiring to fill those
20 positions.

21 Senator Gillibrand: And have you personally spoke to
22 the Air Force Academy cadets about the academy's current
23 climate surrounding sexual harassment and assault?

24 Dr. Wilson: Senator, I have talked to cadets at the
25 academy. I do not think I have talked to them particularly

1 about that issue, but I had a number of meetings with cadets
2 with no one else there other than the cadets and me for them
3 to talk about whatever they wanted to talk to me about.

4 Senator Gillibrand: I would recommend you make the
5 effort to do that.

6 Dr. Wilson: Thank you.

7 Senator Gillibrand: Thank you, Mr. Chairman.

8 Senator Inhofe: Thank you, Senator Gillibrand.

9 Senator Scott?

10 Senator Scott: Thank you, Mr. Chairman.

11 Good morning to the panel. Thank you both for being
12 here, and thank you for your service to our country.

13 I was happy to read about the Air Force's efforts to
14 advance its hypersonic weapons program. It is no secret
15 that our nation and our military are facing competition from
16 both Russia and China. It was during a recent HASC hearing
17 when Under Secretary Griffin stated concerns about our
18 country's slow pace of advancement in hypersonic technology.
19 He said we will, with today's defensive systems, not see
20 these things coming. That is a little disconcerting.

21 My question, Secretary Wilson, what is the Air Force
22 doing in the field of hypersonic weapons to ensure the U.S.
23 does not lose its technological advantage?

24 Dr. Wilson: Senator, we had a summit on hypersonics in
25 the Air Force last summer in July and made the decision to

1 pursue two different prototypes as part of that work. One
2 of those prototypes we are doing in partnership with DARPA.
3 The other one was the one that you saw announced in the
4 paper last week.

5 I think the other piece of good news is that the
6 services are working very closely together on these
7 technologies, and the guidance is to go fast and to leverage
8 the best technology available.

9 Senator Scott: Thank you.

10 If funded to the level requested in the President's
11 budget, when do you expect we will be able to deploy a
12 hypersonic weapon on Air Force aircraft? Either. General?

13 General Goldfein: Sir, there are actually two programs
14 that we are working on right now. One is a hypersonic
15 conventional strike weapon, and the other one is an air-
16 launched rapid response weapon. Both of those are what you
17 see in our budget in terms of our investment in hypersonic
18 technology. I do not have right now a prediction of when we
19 can actually field those. I can just tell you that we are
20 committed to them and we are moving out.

21 Senator Scott: Thank you.

22 I was very pleased to hear earlier this year that South
23 Carolina's Shaw Air Force Base was chosen to be the home for
24 a new remotely piloted aircraft group flying the MQ-9
25 Reaper. Shaw Air Force Base is already home to the 20th

1 Fighter Wing, the largest F-16 wing in the Air Force. So I
2 certainly welcome the new and different mission. I
3 understand the Air Force has already started moving
4 personnel to Shaw in support of this new group.

5 To either you, Secretary, or General, would you give me
6 an update on where we are in that move and how close we are
7 to seeing things happen?

8 General Goldfein: So the wing at Shaw is going to be a
9 mission wing. We chose Shaw Air Force Base because of the
10 mission synergy associated with the command and control
11 headquarters there, the 9th Air Force, 3rd Army, all those.
12 So right now we are in the process of moving the personnel
13 and equipment there. Right now my look of our timeline for
14 the full beddown of being able to bring us to initial
15 operating capability is we are on track. So I do not see
16 any show stoppers right now with what we are going at Shaw.

17 Senator Scott: Can you talk about the MQ-9 Reaper
18 program and the importance it plays in our future Air Force?

19 General Goldfein: I can, and I can talk to you about
20 this as an MQ-9 pilot. I had a chance to check out and fly
21 that aircraft as a general officer. And I will tell you,
22 sir, that I believe that we have only scratched the surface
23 on the true capability of what happens when you separate the
24 aircraft and the cockpit. And it is our young RPA drivers--
25 we call them our A teen Xers -- who are going straight into

1 that program, the oldest of which right now are reaching
2 major to lieutenant colonel. They are going in and coming
3 up with absolutely new ways of being able to employ this
4 weapon system in areas that we had not anticipated before.

5 And there is one thing about these remotely piloted
6 aircraft. They are absolutely fearless. You send them
7 anywhere. And I think not only in the fight against violent
8 extremism, but if you look at the National Defense Strategy
9 and where we look at China, Russia, Iran, North Korea, all
10 those areas, I think the MQ-9 but more broadly unmanned
11 aviation is going to bring some significant dilemmas to
12 future adversaries.

13 Senator Scott: Thank you very much. That is exciting
14 news, frankly.

15 The Air Force has been emphasizing the importance of
16 distributed, adaptive, and resilient basing to address the
17 challenges posed by both Russia and China's advanced area
18 denial capabilities. However, in this year's budget, Air
19 Force investments in prepositioned equipment and improved
20 infrastructure in Europe are at least 10 times the
21 investment in the Pacific.

22 What explains this enormous disparity?

23 Dr. Wilson: Senator, I think as I mentioned before, I
24 think the European Defense Initiative was out ahead of what
25 we were starting in the Pacific, and I think it got a higher

1 priority and perhaps better refinement earlier. And it may
2 be something that we need to look at rebalancing.

3 Senator Scott: Thank you.

4 General Goldfein: Sir, I will just offer that if you
5 take a look at the air component in the Pacific, in the
6 Indo-Pacific, the story there is as we got smaller as an Air
7 Force, significantly smaller over the last several years, we
8 reduced our footprint in Europe primarily and in the CONUS,
9 in the continental United States. But our footprint in the
10 Pacific has been fairly stable over time. And so to take
11 this smaller Air Force that needs to go forward very quickly
12 in support of operational planning by virtue of the fact
13 that we can get there very quickly to blunt and stop
14 adversary activity, you saw us investing in the European
15 Defense Initiative on basing and access so that that smaller
16 force can be more agile as the chairman, as the global force
17 integrator determines where he wants to move forces. That
18 is one of the reasons why you saw so much investment in
19 infrastructure in Europe. And to our Secretary's point, it
20 is time for us that we are looking at what does that
21 commensurate investment need to look like for agile basing
22 in the Pacific.

23 Senator Scott: Thank you.

24 Thank you, Mr. Chairman.

25 Senator Inhofe: Thank you, Senator Scott.

1 Senator Warren?

2 Senator Warren: Thank you, Mr. Chairman.

3 Thank you to our witnesses for being here today.

4 Secretary Wilson and General Goldfein, you may know
5 that I have been asking questions about the future of the
6 F-15C and D variants, which the Massachusetts National Guard
7 flies to keep 24/7 watch over our country. And frankly, it
8 seems like I am getting a different answer every time I ask
9 the question.

10 I think part of the challenge here is that the Air
11 Force does not seem to have a strategic road map for its
12 fighter force. We know that the Navy wants 355 ships
13 because the CNO put out a strategy that said so. We know
14 the Air Force wants to buy fifth generation fighters because
15 you have told us that, but you have not explained your
16 budget plans or how you will prioritize tradeoffs between
17 capability and capacity and how that will translate into the
18 aircraft that we keep and the new aircraft that we will buy.

19 So let me ask. Secretary Wilson and General Goldfein,
20 is the Air Force working on that kind of a road map? And
21 when can we expect this committee to get a look at it?

22 Dr. Wilson: Senator, just to clarify a couple of
23 things.

24 Senator Warren: Sure.

25 Dr. Wilson: With respect to the F-15 and F-16, the

1 budget puts \$1.7 billion into those aircraft for radar and
2 electronic service life extension programs.

3 The Chief directed and we took a look at how do we
4 think about the Air Force, what is our current structure.
5 And we did a deep dive on readiness as well. We have about
6 300 operational squadrons, bombers, fighters, attack,
7 intelligence, surveillance, reconnaissance. And then the
8 question becomes with the new National Defense Strategy
9 released in January, what do we really need given the
10 threats that we face. The Chief has directed a review, and
11 we expect in August to have a review of what are the
12 squadrons we need, not just where are we now and how can we
13 keep things in pretty good shape. So August is when we --

14 Senator Warren: So August we expect to see a road map.
15 Thank you. I think this is really important because we are
16 having to make decisions now about upgrading and retiring
17 platforms, and it is hard for this committee to know what to
18 do until we get a look at the full strategy.

19 The Air Force says that it is a total force, including
20 the Guard and Reserve, and we have moved a lot of capacity
21 into the Guard, so much so that today the Air Force could
22 not complete its mission without the Guard.

23 So with that in mind, can you give me your commitment
24 that our Guard flying wings will be made whole on the planes
25 that they will have available as part of whatever the final

1 strategy calls for?

2 Dr. Wilson: Senator, I think the review that we are
3 doing is probably going to show that we need more force
4 structure than we currently have. And as General Goldfein
5 mentioned, at the beginning of the Gulf War, we had 134
6 fighter squadrons. Today we have 56, active, Guard, and
7 Reserve. The operations tempo for the last 27 years for the
8 Air Force has been very, very high and has stressed our
9 airmen across active, Guard, and Reserve. And you are
10 absolutely right. We cannot do the missions that we do
11 without the Guard.

12 Senator Warren: Well, I appreciate that. I hope that
13 is a commitment to make our Guard whole. But I appreciate
14 that you fully understand how important our Guard is in
15 protecting us.

16 Dr. Wilson: Yes, ma'am.

17 Senator Warren: I want to ask about one other area, if
18 I can. And I know you mentioned this to Senator Heinrich,
19 but I want to follow up, Secretary Wilson. Last September,
20 you announced that the Air Force research lab would lead a
21 yearlong review of the Air Force's science and technology
22 portfolio to update research priorities and strategy. And I
23 was very glad to be able to host you earlier this month at
24 MIT Lincoln Lab where there is so much incredible cutting-
25 edge research going on.

1 I understand that your review is also focused on how
2 the Air Force can more productively engage with places like
3 Lincoln Lab and with States, universities and the commercial
4 sector to be able advance your priorities.

5 Can you just say a word about how you plan to build on
6 these partnerships and what role they will play in the
7 future of the Air Force's efforts to modernize its
8 capabilities?

9 Dr. Wilson: Senator, it is my perception that when the
10 Air Force went through sequester, we reduced research and
11 development, particularly basic and applied, which is kind
12 of the seed corn of the Air Force long term, and we kept it
13 largely internal. I think we are better and stronger when
14 we partner particularly with universities, research
15 universities, on basic and early stage applied research for
16 a variety of reasons, which you and I probably understand.
17 And I am looking forward to the science and technology
18 review which had helped to highlight the areas in which we
19 need to do research and will also tee up ways in which we
20 can partner with others to do research better.

21 Senator Warren: I very much appreciate that. You
22 know, I understand that the AFRL is doing a number of
23 research center site visits. I hope they come to the
24 commonwealth. But I was very pleased to see the increased
25 emphasis on basic and applied research in the Air Force's

1 fiscal year 2019 request.

2 But as you know, I think we can still do better in this
3 area. Our technological superiority is not guaranteed in
4 the future. We have to fund these programs today because
5 they are the seed corn for our technological advances in the
6 future. Thank you.

7 Senator Inhofe: Thank you, Senator Warren.

8 Senator Tillis?

9 Senator Tillis: Thank you, Mr. Chairman.

10 Thank you both for your service and for being here
11 today.

12 I probably will not use my 5 minutes. I got a couple
13 of business questions to ask you. I think you all know I do
14 not focus much on the job that I think you all do well,
15 which is how to position us best against our adversaries.

16 But, General Goldfein, when you were doing your opening
17 comments or it may have been an answer to the chair's
18 question, you were talking about -- first off, I think both
19 of you talked about your 5-year plan. I think that is
20 great, but you have got 2 years of certainty to execute that
21 plan.

22 Let us take a look at China's modernization program.
23 Do they historically fund those programs in 1-year or 2-year
24 cliff intervals?

25 General Goldfein: No, sir, they do not.

1 Senator Tillis: So when is the last time that we would
2 ever have intelligence that China was about to dramatically
3 cut their out-year spending in connection with their
4 strategic plans to grow their air force?

5 General Goldfein: Sir, we have not seen that --

6 Senator Tillis: Like never in modern history?

7 General Goldfein: Not that I know of.

8 Senator Tillis: So when you look at your 5-year plan
9 and you know you only have 2 years of certainty, another
10 Congress to deal with, then how do you handicap the
11 likelihood that you are really going to reach that 5-year
12 objective? I mean, you got to look at it the way I would in
13 business. I have gotten my investors to give me 2 years. I
14 go to go back and convince them to give me 2 to 4 more
15 years. So when you look at the probability of succeeding on
16 your 5-year objective with the uncertainty of spending in
17 the out-years, how do you handicap your probability of being
18 successful? I know everybody in uniform says we are going
19 to make it work no matter what, but there has got to be
20 something behind the scenes that says there is a major risk
21 here because Congress has not done its job and given us any
22 long-term spending trail. And, Secretary, you can start
23 with that and, General, follow up.

24 Dr. Wilson: Senator, to us, having a 2-year certainty
25 is so much better than we have been in the last 10 years.

1 In 9 out of the last 10 years, the military has started out
2 the year with a continuing resolution. Budget certainty
3 matters a lot to us. But we also accept that this is a
4 constitutional republic and that we propose a budget and
5 that the Congress appropriates and authorizes that budget.
6 I would much prefer this system than many of the others,
7 including honestly what China deals with.

8 Senator Tillis: I agree, Madam Secretary. But we also
9 have created a construct that was one of the worst ideas out
10 of Congress, and that is called the Budget Control Act. So
11 on the one hand, we have exactly what you say is a need to
12 come back and appropriate every couple of years. But now we
13 have got this construct that is punitive to the Department
14 of Defense when we do not do our job. That is where some of
15 the weight of your argument, which was very well put, loses
16 its steam because we have created this condition that if we
17 fail to do our job, then you all suffer.

18 I think when we look at these modernization plans, we
19 take a look at these weapon systems acquisitions, we ask
20 ourselves why it is costing so much more money. Every once
21 in a while, Congress ought to look in the mirror because it
22 is because we are not providing any level of consistent
23 certainty for you all to do your jobs.

24 You have got your own work to do, and that is the next
25 thing I want to talk about. How well are you doing on

1 getting to the business of the Air Force, improving
2 procurement, acquisition, sourcing, and all the things that
3 you all -- to me I have got a third, third, third view of
4 the world. A third of the problems here are constructs like
5 the Budget Control Act that Congress has imposed on the
6 process. A third of them are events out of our control.
7 You just got to deal with it. And a third of them are your
8 own self-imposed regulatory burdens and things that you do
9 to yourself that you have not gone back and looked at
10 modernizing. And I view acquisitions, procurement, sourcing
11 as being one of the big ones. So what progress have you
12 made since you were before us last?

13 Dr. Wilson: Senator, with respect to procurement, we
14 put out and I think delivered to all of you a report on how
15 did we do on acquisition last year for all of our programs.
16 And where we had problems, there was a common theme and that
17 was software. We are looking actually at standing up a
18 particular program office specific to software and digital
19 systems because we do not do that well. But we are also
20 implementing a lot of the authorities that you have given us
21 in prototyping and experimentation to be able to go faster.

22 Senator Tillis: Shorter cycles?

23 Dr. Wilson: Exactly. Shorter cycles, learn what we
24 can, and then come back with a program of record. The
25 adaptive engine is a great example of that, \$1.8 billion

1 over the fiscal year defense plan, prototyped engines
2 intended to get 10 percent increase in thrust, 25 percent
3 increase in fuel efficiency.

4 We just let a contract using your other transactional
5 authorities, which you gave to us, for \$100 million put
6 towards space systems. The first two contracts were let for
7 micro-satellites to go direct to geosynchronous orbit using
8 these very rapid other transaction authorities.

9 So we are trying to move forward at speed to get great
10 capability, to learn and fail fast, and use everything you
11 have given us to defeat and dissuade the adversaries.

12 Senator Tillis: Good. Thank you both.

13 Thank you, Mr. Chair.

14 Senator Inhofe: Thank you, Senator Tillis.

15 Senator Nelson?

16 Senator Nelson: Thank you, Mr. Chairman.

17 Just a quick couple of points. General, we have been
18 in touch over and over about things trying to keep your Gulf
19 testing and training range without incursion and
20 development. And I see that we are going ahead with your
21 investment down there on additional telemetry and so forth.

22 I was just down there flying with some of your folks
23 and, again, looking at it from a different perspective, up
24 in the air, about how necessary it is to protect your
25 training range.

1 Likewise, you know, we had a little dust-up down there
2 because fortunately when you stepped in as the top general,
3 the Chief, and said you do not want your undeveloped barrier
4 island messed with because it is going to mess up your
5 training mission, and then I stepped in pursuant to that and
6 stopped the cutting of a pass through there that would
7 increase all of that boat traffic and start to mess up your
8 situation.

9 So I just want to thank you for standing on that. It
10 is one thing for a colonel down there at Eglin to say it.
11 It is another thing for the Chief of Staff of the Air Force
12 to say it. And so I think we have all of that under
13 control.

14 But do you want to just -- maybe a sentence or two to
15 say how important your Gulf training and testing range
16 mission is?

17 General Goldfein: Yes, sir. And what I will emphasize
18 for the committee is the test part of it because the
19 training piece is clearly important, but having a pristine
20 range that we are able to test, whether it is low observable
21 capability and all the things that we do with weapons
22 procurement and testing it at Eglin there, is absolutely
23 critical that we protect that.

24 Senator Nelson: Without going into all the background,
25 are you all aware of the single-point failure of the bridge

1 going across the Indian River to get to not only the Kennedy
2 Space Center but also the Cape Canaveral Air Force Station?

3 Dr. Wilson: Senator, yes, I am.

4 Senator Nelson: Well, as you know, it is actually
5 owned by NASA, but obviously the Air Force uses it and it is
6 critical to the Air Force of getting your various missions
7 across there and then to their facilities to prepare. Do
8 you want to say anything about that?

9 Dr. Wilson: Senator, it is an important way for us to
10 operate there at Cape Canaveral. With respect to that
11 bridge, of course, the property is not owned by the
12 Department of Defense. So with respect to military
13 construction, we cannot fix the bridge, but it is owned by
14 NASA.

15 Senator Nelson: But it is my understanding that you
16 can participate with NASA in some way to -- basically the
17 bridge is going to have to be rebuilt.

18 Dr. Wilson: Senator, I understand that the bridge does
19 not meet the structural requirements. It is a piece of
20 property that we do not own. So it is not something that we
21 have assessed from an engineering point of view.

22 Senator Nelson: Do you think that that bridge is
23 important to you? If it is not repaired, are any of your
24 launch missions going to be impacted on the eastern test
25 range?

1 Dr. Wilson: Yes, sir.

2 Senator Nelson: Thank you, Mr. Chairman.

3 Senator Inhofe: Thank you, Senator Nelson.

4 Senator Perdue?

5 Senator Perdue: Well, I thank both of you for being
6 here again. It seems like you spend more time on the Hill
7 talking to us than you do with your command. But thank you
8 for being here.

9 General Goldfein, as you and the Secretary have been
10 more than patient with us in both open and in classified
11 briefings about the advanced battle management system, ABMS,
12 that you are envisioning -- and I fully support that. As we
13 have also talked about, there is this gap somewhere in the
14 2020s on ISR capabilities.

15 For today, though, I want to talk about how that
16 decision to move to space capabilities and protecting assets
17 in space, given what is going on in particularly the China
18 development in space -- you know, in our past in the United
19 States, we have always looked at space as sort of the
20 scientific endeavor. China looks at it totally differently.
21 It is a military endeavor. And they just recently launched
22 this supposedly debris clearer and other snuggler satellites
23 behind our GPS capability.

24 So help me understand how moving capability from air
25 domain to the space domain actually increases survivability?

1 In this open environment, help us understand what your long-
2 term plan is, including the gap that we have sometime in the
3 2020s.

4 General Goldfein: Yes. Thanks, Senator.

5 I would offer to you that the gap that we are required
6 to fill is that gap between both a contested environment and
7 an uncontested environment. And as we have discussed, the
8 challenge we face today with the current Joint STARS is that
9 the threats can actually keep them far enough away not to be
10 able to do its job. So this is about supporting soldiers,
11 sailors --

12 Senator Perdue: I am sorry to interrupt, General. I
13 apologize. I hate to do that with somebody with four stars
14 on their shoulder.

15 But with regard to the Navy, the Navy is going in a
16 little bit different direction. Can you tell us the
17 difference in their demand structure versus what our demands
18 on ISR in that regard?

19 General Goldfein: It is based on mission. But
20 actually the Navy long term is going in the same direction.
21 I can tell you that the CNO, Admiral Richardson, and I have-
22 - we have had warfighter talks. We are talking about going
23 to a network disaggregated architecture. But the gap that
24 we are filling now is that we have got to make sure that
25 soldiers, sailors, airmen, and marines on the ground in a

1 contested environment, being Kaliningrad, understand enemy
2 ground movement on day one of that campaign at the same
3 time, that I have got it in an uncontested environment,
4 Yemen.

5 The fact that we can fly Joint STARS longer through
6 2028 and possibly longer allows us to take a look at moving
7 now to a disaggregated architecture. And it is more than
8 just space. It is actually how you connect space and air
9 and sea and land together to produce a common air picture, a
10 common ground picture that equally serves someone in
11 Kaliningrad inside a contested domain where Joint STARS
12 cannot help today and in Yemen where Joint STARS can.

13 So this has got to be transparent to those on the
14 ground, and as the service that organizes, trains, and
15 equips and presents forces, we got to fill that gap. And
16 that gap exists between contested and uncontested.

17 Senator Perdue: In the recent action that the U.S.
18 took in Syria, those weapons were GPS-benefited weapons.
19 And because of that, as we know today, I think it is still
20 true that no collateral damage was incurred because of the
21 pinpoint action. We also know that Russia and China can jam
22 and can affect GPS.

23 And I know this is an open environment, but again, are
24 we moving in a direction where those capabilities are
25 hardened and can be protected in the new battlespace?

1 Secretary?

2 Dr. Wilson: Senator, the current plan for the Air
3 Force is to move to jam-resistant GPS, and that is in the
4 budget proposal. Of our 77 satellites that the Air Force
5 operates, 31 of them are GPS. And we not only provide
6 position navigation, we also provide timing to the New York
7 Stock Exchange and to the ATM machine that you get your cash
8 from. So it enables a huge industry. It also enables a lot
9 for the warfighter.

10 Senator Perdue: I have one last question. On a recent
11 trip to China, we were so privileged to stop in Alaska and
12 met the F-22 squadron there. And I have to tell you it is a
13 lot of money, but boy, is that impressive, the people, the
14 equipment, the mission, the capability. I slept better for
15 the next week or 2.

16 The commanding officer, though -- I asked a question.
17 I said, you know, the primary mission up here -- and we had
18 pictures and we saw this information about how the F-22 is
19 tailing a TU-95. So you have a pre-gen one aircraft being
20 tailed by a fifth gen aircraft. My question, obviously not
21 being an expert -- I said why do we have a gen five chasing
22 a gen one, and he said, sir, because we are here.

23 Can you speak to that? I mean, this is a very
24 sophisticated, very expensive piece of equipment. It is now
25 aging, even though it is in the first few years. What are

1 the replacements for that? What is the future of that? We
2 got to fly the wings off it to train people. I get that.
3 help me understand. And this, again, is the limitation of
4 money and funding, but help me understand the mission and
5 strategy of that fifth gen capability.

6 General Goldfein: Thank you, sir.

7 It is true that we use those assets and we place those
8 air superiority assets, be that F-15, F-22, F-35, F-16, and
9 we place those where we need to be able to intercept,
10 whether it is Chinese or Russian long-range aviation. So no
11 surprise that we would be using the F-22 to intercept
12 Chinese long-range aviation.

13 Very important, though, that I think we acknowledge
14 because the previous question talked about sustainment costs
15 of the F-35. And I will tell you from the Secretary of
16 Defense on down with Secretary Shanahan, we are all involved
17 in wire brushing down sustainment costs of new aircraft.

18 But what has not been talked enough about is the
19 operational successes that we have enjoyed. Just to share
20 with you a couple. We took the F-35 to Red Flag last year.
21 86 percent mission-capable rate of our newer F-35's, a 20 to
22 1 kill ratio against the most advance adversaries we could
23 put up, more advanced than anything we might face because we
24 were up against ourselves. 26 of 27 direct hits on air-to-
25 ground targets in the most difficult threat environment that

1 we could put them in from both an air and a ground
2 perspective.

3 We went to Combat Hammer and Archer, which is where we
4 test capabilities, and they were a 100 percent hit rate on
5 air-to-ground munitions and 11 for 11 on shooting AMRAAMs.
6 So the newer F-35's, which is a fusion machine that allows
7 it to actually take information from space and cyber, fuse
8 it together with onboard and off sources, is allowing this
9 weapon system to become the quarterback for the team.

10 And I will just finish by saying I had a great
11 conversation with the Israeli Air Chief, who are now flying
12 the F-35, and he said it is an absolute game-changer for
13 them. They are able to see and sense and fuse information
14 that they have never seen before across the region. So this
15 F-35 and fifth gen is a game-changer for us.

16 Senator Perdue: Thank you.

17 Mr. Chairman, I am so gratified that the rebuilding and
18 the future of our Air Force is in the hands of these two
19 former U.S. Air Force Academy classmates. Thank you both.

20 Senator Inhofe: Thank you, Senator Perdue.

21 I might add that was quite a discussion when they cut
22 that back to -- I think we currently have 177 of the F-22's.
23 It was considerably more than that I believe. Do you
24 remember the figure?

25 General Goldfein: Yes, sir. We were on track for

1 upwards of plus 300 to 500, and it was cut to 187.

2 Senator Inhofe: Yes, it was about half.

3 Senator Donnelly?

4 Senator Donnelly: Thank you, Mr. Chairman.

5 I want to thank you both for testifying here.

6 Secretary Wilson and General Goldfein, I do not want to
7 talk too much of our time on the subject today, but I do
8 want to quickly touch on the manned fighter mission in Fort
9 Wayne. I know you are aware of all the great work that the
10 men and women do there every day. General Goldfein, I am
11 sure you will recall our conversation prior to your
12 nomination, in which you told me that you would honor
13 General Welch's commitment that he made to me personally as
14 Air Force Chief of Staff that the Air Force would be
15 maintaining a manned air combat mission in Fort Wayne that
16 would continue to identify opportunities for mission
17 conversion going forward.

18 Secretary Wilson, you likewise said that you would
19 stand by the commitment.

20 It is my understanding that the platform transition
21 that we are looking for requires a strategic basing action.
22 That action is still awaiting a final formal decision.
23 Those decisions are made at the Secretary level.

24 Madam Secretary, what is the status of the strategic
25 basing action?

1 Dr. Wilson: Senator, we have the A-10's there. 173 of
2 the A-10's have had rewings. The fiscal year 2018 budget
3 restarts the line for rewinging the A-10 and buys four more
4 wing sets. The fiscal year 2019 budget, which is in front
5 of you, will buy somewhere between 8 and 12 additional wing
6 sets, and we have asked the acquisition folks to see, once
7 they get the contract in place, whether we can continue to
8 accelerate the rewinging of the A-10.

9 Senator Donnelly: But the platform transition. Is
10 there anything regarding the status of the strategic basing
11 action regarding that?

12 Dr. Wilson: Senator, we expect to fly the A-10 through
13 the 2030s. So there is no strategic basing action with
14 respect to that.

15 Senator Donnelly: As you know, this is an issue of
16 great concern to me. They were talking about the F-16's,
17 and what we want more than anything is a combat mission, as
18 you talked about. So I would appreciate it, in regards to
19 the discussion today, if you will come back and meet with me
20 again for that purpose in my office. We have talked before.
21 This is very, very critical to Fort Wayne, to the promises
22 that have been made to us, the word of the Air Force Chief
23 of Staff, and I would appreciate it if you would commit that
24 you -- I can come over to the Pentagon or have you come by
25 my office, either way. But I would appreciate it if we can

1 get together again soon.

2 Dr. Wilson: Yes, sir. Happy to.

3 Senator Donnelly: Thank you very much.

4 Thank you, Mr. Chairman.

5 Senator Inhofe: Thank you, Senator Donnelly.

6 Any further -- Senator King?

7 Senator King: Secretary Wilson, a couple of weeks ago,
8 the Defense Department stopped taking deliveries on the
9 F-35's because of a disagreement about the priming of some
10 fastener holes. I guess two questions. I think we have had
11 200 of these that have been delivered. Was this a defect
12 that should have been picked up sooner, and is this a change
13 in the Air Force's quality requirement, or is this a problem
14 in terms of the contractor?

15 Dr. Wilson: Senator, as I understand it, in this case,
16 it was identified -- I do not know whether it was the Navy,
17 Marine Corps, or Air Force aircraft that identified
18 corrosion around those rivet holes. And the root cause was
19 a failure to prime the rivet holes. Lockheed was apprised
20 of that.

21 The reason that the joint program office, because this
22 is not an Air Force-run program, but the joint program
23 office stopped deliveries because there is a disagreement
24 with Lockheed about who bears the cost of going back to fix
25 that. It was a requirement of the contract, and they, in my

1 view, need to fix the problem over time so that we do not
2 have corrosion around those rivets.

3 Senator King: And that is your position that it is the
4 contractor's responsibility to take care of this problem.

5 Dr. Wilson: Yes, sir.

6 Senator King: Thank you.

7 Thank you, Mr. Chairman.

8 Senator Inhofe: Thank you, Senator King.

9 And thank both of you, the witnesses, for your patience
10 and your great knowledge and sharing that with us.

11 We are adjourned.

12 [Whereupon, at 11:38 a.m., the hearing was adjourned.]

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