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COMMITTEE ON ARMED SERVICES

UNITED STATES SENATE

UNITED STATES TRANSPORTATION COMMAND

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1	UNITED STATES TRANSPORTATION COMMAND
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3	Tuesday, May 2, 2017
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5	U.S. Senate
6	Committee on Armed Services
7	Washington, D.C.
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9	The committee met, pursuant to notice, at 9:31 a.m. in
10	Room SD-G50, Dirksen Senate Office Building, Hon. John
11	McCain, chairman of the committee, presiding.
12	Present: Senators McCain [presiding], Inhofe, Wicker,
13	Fischer, Cotton, Rounds, Ernst, Tillis, Sullivan, Cruz,
14	Sasse, Strange, Reed, Nelson, McCaskill, Shaheen,
15	Gillibrand, Blumenthal, Donnelly, Hirono, Kaine, King,
16	Heinrich, Warren, and Peters.
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OPENING STATEMENT OF HON. JOHN MCCAIN, U.S. SENATOR
 FROM ARIZONA

Chairman McCain: Good morning. The Senate Armed
Services Committee meets today to receive testimony from
General Darren McDew on the posture of the United States
Transportation Command.

7 TRANSCOM is more than just a functional command that 8 moves personnel and materiel from place to place. It is a 9 crucial asset on which our military's global power 10 projection depends and one we must not take for granted. 11 As General Patton once said, "The officer who doesn't 12 know his communications and his supply as well as his 13 tactics is totally useless."

General McDew and his predecessors have warned Congress for years that the proliferation of anti-access/area denial capabilities pose significant challenges for our transportation and distribution networks in contested environments.

Put simply, any assumption that TRANSCOM will have uncontested access to international airspace and sea lanes in a future conflict is increasingly outdated.

Transport ships and aircraft can be held at risk over greater and greater distances. Our logistic networks are centered on large air and sea ports, which serve as efficient hubs, but are also vulnerable to attack. And then

1 there are threats on the digital battlefield.

Even as cyber intrusions have become increasingly prevalent, nearly 90 percent of TRANSCOM's missions are still executed over unclassified commercial communication networks. This vulnerability extends operational risk to every single combatant command that TRANSCOM supports on a daily basis.

8 This committee understands that efforts are currently 9 underway to develop an overarching global plan that would 10 articulate how TRANSCOM would operate in a contested 11 environment, whether that be in the air, at sea, or in 12 cyberspace.

General, I look forward to an update on this plan today and ask that you provide as many details as possible as to preliminary findings of this effort.

16 I also hope you can discuss TRANSCOM's inaugural wargame, which took place last fall and examined mobility 17 and distribution operations in a contested environment. Too 18 19 often, operational wargames focus exclusively on combat 20 capability and take combat logistics as a given. Combat 21 capability is obviously important, but it does not matter 22 much if it never arrives to the fight or cannot be sustained 23 once it does. I look forward to hearing the lessons learned 24 in TRANSCOM's wargame.

25 General McDew, it has been almost 2 years since your

1 confirmation hearing before this committee, and I am looking 2 forward to hearing the steps you have taken to address some 3 of our shared concerns and what more needs to be done. In 4 particular, this committee understands the readiness and 5 modernization challenges across the Department of Defense 6 also affect TRANSCOM.

A look at sealift, for example, reveals the same
downward spiral we have seen elsewhere in the military.
Budget cuts mean fewer new ships. Existing ships get older.
Maintenance gets more expensive and more difficult.
Readiness suffers. And more money is siphoned from future
modernization to pay for current readiness.

Military Sealift Command's organic surge sealift fleet is essential for rapid response in the event of a crisis or wartime scenario. But the average age of ships in our surge fleet is now 39 years. Over a recent 5-month period, less than 60 percent of sealift ships were able to activate during planned exercises due to various maintenance problems.

The requirement for so-called roll-on/roll-off ships has been relatively stable since the 1990s. But since Desert Storm, the surge sealift fleet has been cut nearly in half to just 27 ships. We are already 10 ships short of the current requirement, enough to move two full armor brigade combat teams. And, over the next 6 years, another nine will

1 age out.

So while I look forward to hearing how TRANSCOM plans to address its readiness and modernization challenges, I do so fully aware that it cannot truly do so unless we in the Congress step up and do our jobs, repeal the Budget Control Act, and provide full and steady funding to meet our national security requirements.

8 General McDew, the committee thanks you for your 9 continued service to the Nation, we look forward to your 10 testimony today.

- 11 Senator Reed?
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STATEMENT OF HON. JACK REED, U.S. SENATOR FROM RHODE
 ISLAND

Senator Reed: Thank you very much, Mr. Chairman.
Welcome, General McDew, to the committee and for your
testimony. Thank you for your service and the service of
all of the men and women of TRANSCOM. We are knowledgeable
and appreciative of the critical role that TRANSCOM plays,
and thank you for your leadership.

9 The work of TRANSCOM may be invisible to many, but it is critical because it delivers what our forward-deployed 10 11 personnel need when they need it. While TRANSCOM performs 12 thousands of operations successfully, it is facing a number of daunting challenges. While all the military works to 13 14 respond to potential and actual cyberattacks, TRANSCOM faces 15 a unique set of cyberthreats because it must work with 16 private sector entities in the transportation and shipping 17 industries to support DOD deployment operations.

18 Three years ago, the committee issued a report on 19 certain aspects of the TRANSCOM cybersecurity situation. 20 General McDew, we would like to hear what steps you have 21 taken to respond to the issues identified in that report and 22 any others you may have identified since you assumed 23 command.

The Ready Reserve Force, a group of cargo ships held in readiness by the Maritime Administration, is aging and will

need to be modernized over the next decade, as the chairman
 pointed out eloquently.

3 DOD also needs to ensure that the Civil Reserve Air 4 Fleet, or CRAF, program, which provides as much as 40 5 percent of wartime airlift needs, remains viable after 6 operations in Iraq and Afghanistan, and will be able to 7 provide needed surge capacity in the future. I would 8 appreciate an update on how TRANSCOM intends to ensure these 9 fleets are ready to meet the command's requirements.

Our global transportation capability, owned and managed by TRANSCOM, has been one of our asymmetric advantages for many years now. However, we cannot assume that potential adversaries will allow us free rein in this area in the future.

General McDew, as you said in your prepared statement about future conflicts, we expect contested global sea lanes and air routes to a degree we have not faced since World War II. We are interested in hearing how you are addressing the growing reality that the access you enjoy now may be increasingly challenged.

21 General McDew, thank you again for your service, and I 22 look forward to your testimony.

23 Chairman McCain: Welcome, General.

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STATEMENT OF GENERAL DARREN W. McDEW, USAF, COMMANDER,
 UNITED STATES TRANSPORTATION COMMAND

3 General McDew: Thank you very much, Chairman. I am glad that you pointed out that it has been 2 years since I 4 5 have been here. I have a quick opening statement, but I 6 would like to say that my daughter-in-law has forgiven you. If you remember, 2 years ago, I sat here and I had a 7 chance to introduce my family. And over my left shoulder 8 was my brand-new grandson, Henry. Henry was a bit of a 9 rotund child at about 6 months old, and you pointed out that 10 11 he had not missed many meals. 12 [Laughter.] General McDew: Most of us got a chuckle. My daughter-13 14 in-law did not get a chuckle from that. 15 Chairman McCain: Please ask her to accept my 16 apologies. It is a beautiful grandchild. 17 [Laughter.] Chairman McCain: Oops. 18 19 General McDew: But it is now part of the Congressional 20 Record. 21 [Laughter.] 22 General McDew: Chairman McCain, Ranking Member Reed, 23 and distinguished members of the committee, it is an honor 24 and a privilege to be with you here today representing the 25 men and women of our United States Transportation Command.

I thank you for your continued support of our dedicated
 professionals, all working together to provide our Nation
 with a broad range of strategic capabilities and options.
 I also want to emphasize the vital role our commercial
 industry plays, what I call our fourth component in our
 success.

7 It is worth noting yesterday was the 30th anniversary 8 of USTRANSCOM's core staff standing up at Scott Air Force 9 Base, and we have been going strong ever since, 30 years of 10 history.

11 I can say confidently that your United States 12 Transportation Command stands ready to deliver our Nation's objectives anywhere at any time. We do this in two ways. 13 14 We can provide an immediate force tonight through the use of 15 airlift and air refueling fleets. And we can provide a 16 decisive force, a decisive force when needed through the use of strategic sealift and surface assets. You see it every 17 time you read or hear the news. 18

When North Korea increased its provocation of our
 Pacific allies, America responded with assistance.

21 USTRANSCOM delivered that assistance in the form of missile 22 defense systems, personnel, and support equipment, moving by 23 sea and air 3,000 miles across the Pacific Ocean.

24 When you read about America's brigade combat teams 25 rolling through Europe, it was USTRANSCOM's ability to

1 provide a decisive force to reassure European allies.

2 When America needed B-2 stealth bombers to fly 11,000 3 miles from Missouri to Libya and back, it was our air 4 refuelers that got them there.

5 From national disasters to epidemics to acts of war, 6 the men and women of USTRANSCOM are ready to deliver this 7 Nation's aid, assistance, and, indeed, hope to the world. 8 These missions must execute without fail.

All the while, these great professionals quietly manage 9 a myriad of daily tasks around the globe, most of which 10 11 Americans will never read about. It takes diligence, skill, and innovation to provide that kind of readiness for 12 13 America, and the men and women of USTRANSCOM have never let 14 us down. I am proud to serve next to them, and I say with 15 confidence that our organization is ready to respond when 16 our Nation calls.

That confidence, however, is not without concern. The environment we operate in today is increasingly complex, and we expect future adversaries will be all the more versatile and dynamic, forcing us to adapt, change, and evolve.

Furthermore, we are viewing potential adversaries through a transregional, multidomain, and multifunctional lens. Properly understanding the potential threats posed by China, Russia, Iran, and North Korea, as well as violent extremists, in a global context is of utmost concern for our

future national security. In each of these scenarios,
 logistics plays a critical but often overlooked role.

Today, USTRANSCOM is critically examining how we execute our logistics mission in the contested environments of the future, a space we have not had to operate in logistically speaking for a very, very long time. We are exercising and wargaming these logistic scenario, forcing planners of every ilk to account for transportation's vital role and for, for the first time, potential loss.

Earlier this year, USTRANSCOM held its first-ever contested environment wargame, imagining a scenario where we did not dominate the skies or own the seas. This wargame uncovered a surprising amount of lessons learned, which we have already started to absorb. We have adapted our tactics, techniques, and procedures accordingly, but we still have work to do.

17 I am also concerned about our national strategic sealift capability. Any further delay to the 18 19 recapitalization of our military sealift fleet creates risk 20 in our future ability to deploy forces across the globe. 21 These concerns are compounded further by Merchant 22 Marine shortages and the reduction of U.S.-flagged vessels. 23 With today's resources, we are capable of meeting 24 today's logistics needs. However, if we, together, do not 25 take action soon, many of our Military Sealift Command

vessels will begin to age out by 2026. A significant
 portion of the DOD's wartime cargo capability moves on these
 ships.

As a bridging solution, and with your approval, we can purchase used ships until we can build new ones ourselves. This will not solve the problem forever, and we will need your help for all of it.

8 My final concern is the threat of attack from the cyber domain. Although cybersecurity is a DOD-wide focus area, 9 USTRANSCOM is distinctly vulnerable because the majority of 10 11 the command's transportation data resides within and travels 12 through the unsecure commercial Internet. Furthermore, unsecure networks and systems of our commercial 13 14 transportation service providers coupled with critical 15 infrastructure requirements almost wholly reside outside of 16 our control.

17 In light of these challenges, USTRANSCOM is focusing our cyber efforts on discipline, design, and defense, in 18 order to ensure we continue to accomplish our mission. 19 The 20 command is collaborating with U.S. Cyber Command, DOD 21 agencies, Federal cyber organizations, industry, and 22 academia to identify and mitigate gaps and shortfalls, as 23 well as to seize opportunities to advance our cyber 24 resilience and improve mission assurance.

25 I thank you again, Chairman McCain and Ranking Member

Reed and the members of the committee, for inviting me to speak to you today to represent this 30-year-old command, USTRANSCOM. Our TRANSCOM team will continue to provide joint solutions to ensure our Nation is able to deliver an immediate force tonight and a decisive force when needed anywhere in the world. I respectfully request my written testimony be submitted for the record, and I look forward to your questions. [The prepared statement of General McDew follows:]

1 Chairman McCain: Thank you. Without objection. 2 Thank you very much, sir. 3 A major concern for the Navy is a lack of sufficient U.S.-flagged ships and robust Merchant Marine to meet future 4 5 demand. Is that a major concern of yours? 6 General McDew: Yes, it is, Senator. Chairman McCain: Do we have any plans, that you know 7 8 of, to rectify that? General McDew: Chairman, I believe that we are working 9 very closely with the United States Navy. The Navy 10 11 understands the depth of the problem. 12 Chairman McCain: Do we have any plans to rectify that 13 shortfall? 14 General McDew: There is a Navy recapitalization plan 15 that is being built right now. It should be unveiled in the 16 next few weeks. I do not want to get ahead of the Navy, but we worked very closely with them on that. 17 Chairman McCain: The real secret is that our ability 18 19 to move supply and support modern military forces, to a 20 large degree, rests on the support it receives from private 21 sector companies, right? 22 General McDew: It does. 23 Chairman McCain: And so suppose we are in a combat 24 scenario. Can we continue to rely on those private

25 companies or corporations to supply us with what we need?

General McDew: Our U.S.-flagged fleet of ships has been a reliable partner for decades. The Merchant Marine force that does this work is a viable and proud patriotic unit.

5 Chairman McCain: I guess I am talking about having to 6 transport troops and materiel into a contested region. Can 7 we rely on these nonmilitary companies, such as UPS and DHL 8 and Maersk and others to go into combat areas?

9 General McDew: Chairman, our first force to go into
10 these contested environments is our organic aircraft and
11 organic sealift ships.

12 Chairman McCain: Yes, and that is some 600 refueling 13 tankers to transport one combat team, according to the 14 information I have. Do we have the capability to move a 15 sufficient number of individuals and materiel into a combat 16 zone without relying on civilian sources of transportation? 17 General McDew: Chairman, it depends on what sufficient 18 means. If we are going to --

19 Chairman McCain: Let's take Korea. Suppose that a 20 conflict broke out in Korea, and the North Koreans have some 21 limited antiship capability. Can we rely on those 22 nonmilitary corporations to go into -- maritime capabilities 23 to go into contested areas, into combat zones? 24 General McDew: Today, Chairman, I would not call upon

24 General McDew: Today, Chairman, I would not call upon 25 the commercial industry to go into a contested environment.

1 We have organic --

Chairman McCain: So you have sufficient capability to 2 move what we need without relying on them? Is that correct? 3 General McDew: We have a sufficient force today, and I 4 5 have talked to General Vince Brooks and his staff, to 6 provide him what he needs in the first 30 days organically. Beyond that, we will have to continue to assess how much 7 8 continues to flow and how much of that we can mitigate the threat by the time we have to get to the use of commercial 9 10 vessels. 11 Chairman McCain: According to what I am told, it can 12 take 200 C-17 sorties to deploy a single brigade combat 13 team. Is that your correct assessment? 14 General McDew: I would not like to argue numbers with 15 you at all, but I do know that --16 Chairman McCain: I am not getting into an argument. I am saying that this is the information that is provided to 17 us by the Department of Defense. It is not my opinion. 18 19 That is the information that we have from the Department of 20 Defense. 21 Are you able to ensure that global force projection is 22 a primary capability given the assets that we have and not 23 having to rely on non-DOD capabilities for, say, a conflict 24 in Korea? 25

General McDew: It is not easy. However, with a global

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1 force, and that is what U.S. Transportation Command is, and 2 we use the forces that are available, we can do 200 C-17 3 sorties.

4 Chairman McCain: You can do 200 C-17s, and that gives 5 you one brigade combat team. I doubt, if there is a 6 conflict in Korea, that one brigade combat team would be 7 sufficient for us to reinforce our forces on the ground in 8 Korea.

9 What I am saying, General, is that we are reliant to a 10 larger and larger degree on the private sector companies, 11 and there is great question amongst many experts that we do 12 not have the capability, say in Korea, say in Eastern 13 Europe, to resupply and maintain our ability to carry out 14 success in combat.

Now are you telling me that we can and are and have that?

General McDew: We do not have the capability that I Wish we had, but we have a capability that can provide a force when needed. And the force that General Brooks is asking me to deliver can be delivered initially by our organic fleet. We have put a lot of capability into --Chairman McCain: In contested areas?

General McDew: We have put a lot in the commercial sector that we cannot rely on in contested areas. But the initial force can be brought by organic fleets, and then we

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1 will have to see what we can do after that.

2 It is a challenge because of how we have gotten to 3 where we have gotten to.

4 Chairman McCain: Well, General, to "see what we can do5 after that" is not comforting to this committee.

6 Senator Reed?

7 Senator Reed: Thank you, Mr. Chairman.

8 Let me focus on the issue of cyber, which you brought 9 up, and I brought up in my comments.

As you know, the committee did a report based upon incidents of your contractors, private contractors, in June 2012 through June 2013, where there were cyber breaches. I thank TRANSCOM, because they cooperated in the report. Just a few points emerged that were very critical, and I wanted to get your sense of how much progress you have made.

First, there appeared to be confusion within DOD about what information relating to cyber compromise of private sector contractors may be lawfully shared. That is one issue.

Second, TRANSCOM had not provided other DOD components or the FBI a list of operationally critical contracts about whom the command would like to be alerted when a compromise occurs. And then there were gaps in cyber reporting requirements contained in TRANSCOM's contracts.

25 Although I must give you credit, sir, because TRANSCOM

was the first DOD component to require contractors to report
 cyber intrusions.

3 Can you comment on these issues and, in general, where 4 we are?

5 General McDew: Senator, we have transformed our view 6 of cyber. Last year, cyber roundtables that we did, we did three separate sets of cyber roundtables to get us to a 7 8 different level of awareness and knowledge. What that has 9 driven us to do is that our contracts are now more cyber-10 aware. The way we deal with contractors is more cyber-11 aware. And we are asking industry to partner with us to set 12 a higher cyber standard.

The problem we have is, sitting in the seam between DOD 13 14 and commercial industry, is that the rule sets are 15 different. We can defend the Department of Defense 16 networks, but we do not have any control over what happens 17 in the civil networks. Sometimes, a commercial company is disincentivized to report an intrusion. And sometimes, they 18 19 do not have the wherewithal to know that they have had an 20 intrusion.

Those things need to be squared away. So we are partnering with CYBERCOM and also the interagency to see where the FBI and DHS can maybe look at those intrusions differently. I am having a meeting with them later this week because I believe the commercial viability of the

company is one thing. National security is another. And
 because a company is intruded upon, it is not always just a
 commercial problem.

Senator Reed: Are you planning to suggest legislative
proposals that would give the Department of Defense more
authority in this regard, or clarify its authority? Maybe
clarification is a better word.

8 General McDew: I am not sure that DOD needs more 9 authority, but I believe a bridging of the gap between DOD 10 and the rest of the Federal Government is needed to happen, 11 and to see where we can square that.

Senator Reed: Let me follow up on two of the questions that Senator McCain asked.

First, as we move to more emphasis on the Pacific, particularly North Korea, there is the issue of platforms, both air and sea. But there is also the issue of facilities. Do you have an assessment of the needs for docks or airfields that have to be repaired or remediated so that you can continue to operate?

General McDew: We do a regular annual assessment, a rotating assessment through every year. We publish an en route master plan of ports and rail all around the world.

23 We believe we have sufficient facilities globally to 24 handle most contingencies. Unfortunately, until you get 25 into the fight, you do not know specifics about which exact

ones you are going to need when, because you do not know
 what the enemy is going to take away from you.

3 So based on initial assessments, we do it, and then we 4 continue to assess as the enemy moves and we countermove.

5 We believe that, in the early days, as we provide ways 6 to mitigate the threat, maybe we have greater access in some 7 places that we do not think of using now, and we have to be 8 resilient enough to go to those places.

9 Senator Reed: And with regard to the issue of ships 10 particularly, or aircraft going into contested areas, do you 11 have any contractual authority to compel them to do that? 12 Or do they have an opportunity in the contract to just 13 simply decline?

General McDew: So it is twofold. We also have a responsibility to them to not send them into harm's way if they are not prepared to go, in particular with the Civil Reserve Air Fleet.

18 Right now, with the FAA, the FAA trusts us to make the 19 determination of when a place is sufficient to send in a 20 commercial aircraft. We owe that to them. We also owe them 21 a little bit better training on tactics and procedures, and 22 maybe some way of how to operate in a convoy environment.

23 My Military Sealift Command commander right now is 24 trying to work with commercial industry to see where we can 25 strengthen their ability to operate at least on the edges of

1 the contested environment.

2 Senator Reed: And again, is there any consideration to 3 legislation that might give you more appropriate authorities 4 in this regard? Because the problem the chairman has 5 pointed out is a real problem.

General McDew: The problem is, indeed, real. We have
gone down the path of trying to work with industry because
they have been beside us a long time. We believe they will
want to. But we do not want to put a ship in harm's way,
because losing the ship is worse than not sailing the ship.
Senator Reed: Thank you.

12 Thank you, Mr. Chairman.

13 Chairman McCain: Senator Inhofe?

14 Senator Inhofe: General McDew, one of the problems 15 that we have when you are trying to move this equipment, the 16 function that you perform, it is either by sea or by air. 17 Air, obviously, is the one that meets the needs because you 18 do not have a lot of the time that you normally would have 19 to be dealing with.

But we also know the risks that are out there. We know the surface-to-air capability of the enemy. We know the air-to-air capability. We know those problems that exist. And as was pointed out by the chairman in his opening statement, we are not able to handle the capacity by air, so it ends up being by ship. Then you have problems there too.

1 So with the age of our fleets right now, 39 years for the ships, and then when you look at the C-5s, C-17s, you 2 3 look at what we are doing right now at Tinker Air Force Base, trying to take the KC-135s down to the skeleton and 4 5 then just rebuilding them, how big of a problem do you see 6 this today and as you look into the future, to perform the functions that you are supposed to be performing with just 7 8 the sheer age of this stuff? The KC-46 will not be around for some time to relieve this. So what kind of a problem is 9 10 this?

General McDew: Senator, recapitalizing all of those fleets is a problem. Doing it underneath the budget constraints we have had will be nearly impossible.

14 And also, we owe the Congress possibly better numbers. 15 I have been part of propelling some numbers of tankers that 16 are needed to provide help around the globe, the number of 17 ships. Our contested environment wargames tell us that those numbers may not be sufficient, because we have never, 18 in the history that I can remember, planned for attrition of 19 20 our logistics. And we have not fought for 70-plus years an adversary that can do that to us. 21

22 So age is one level of attrition. Enemy action is 23 another level of attrition. Lack of sufficient maintenance 24 so that it is reliable is another.

25 The tanker problem, if we are going to go after 12

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airplanes a year, of the KC-46, of recapping, that is going
 to produce risk long-term as these airplanes continue to age
 as we recap.

Senator Inhofe: That is true. It is also, as you are making the decisions now, I can remember when we were making decisions on the C-17. I remember we talked about at one time that it was going to be 210. Then it was going to be -- anyway, when Cheney came along and actually increased that.

But every time you make those changes, you are affecting risk. That is the thing that concerns me.

12 Now the chairman brought out our reliance upon the private sector in some of these areas. I was reading in 13 14 your prepared statement, and I will just repeat it here: 15 "Unfortunately, the U.S.-flagged international commercial 16 fleet and Mariner pool has shrunk over time. While we have 17 contingency plans, further reductions may cause us to investigate other options, such as using more foreign-18 19 flagged international commercial vessels manned by foreign 20 crews during crisis or war. American shipping companies continue to re-flag vessels to foreign nations, diminishing 21 22 the size of our commercial fleet."

Now, we had said that our commercial fleet should be able to take care of some 90 percent of the need. My concern is every bit as much the reliance upon the other

1 countries as it is being reliant upon the private sector.
2 Do you agree with that?

3 General McDew: Senator, we have always been a Nation 4 that has had a large enough maritime fleet, and we have been 5 a maritime country, and we have always had the ability to do 6 that indigenous to U.S.-flagged vessels. Senator Inhofe: Yes, that is what we have always been 7 8 able to do. That is not the case now. 9 General McDew: We are in jeopardy now. Now we are at 10 about 80 ships. 11 Senator Inhofe: This is a new threat that was not 12 there before, and I agree with that, and I am concerned 13 about that. 14 Thank you, Mr. Chairman. Chairman McCain: Senator Shaheen? 15 16 Senator Shaheen: Thank you, Mr. Chairman. General McDew, thank you for being here. I certainly 17 appreciate what you said in your statement about the 18 19 importance of TRANSCOM to any action we take anywhere in the 20 world, so thank you, and everyone who serves in TRANSCOM. 21 As I know you are aware, the 157th Air Refueling Guard 22 Wing is at Pease in New Hampshire. We are one of those 23 places that is going to first get the KC-46A tankers. I 24 have had a chance to go up with the 157th and watch them 25 refuel and am amazed at the skill and precision that all of

1 those fliers have and how important it is to have that 2 refueling capability as we are looking at what we need to do 3 around the world.

While I appreciate what you said about our problems are not going to be solved by the KC-46, can you talk about how important it is to have those planes delivered? I know the delivery date has slipped a little bit, so what are we doing to make sure that they are coming in on time where we need them to go?

10 General McDew: Senator, behind the cyberthreat, tanker 11 recap is probably my number one priority. If there was one 12 thing that keeps me awake at night, that is the ability to 13 provide the air refueling support that we need globally to 14 respond anywhere around the world at the time of our 15 choosing. The 157th is one of those units that we count on 16 to do that.

The KC-46 recap, or recapping takers writ large, is a very, very important program that cannot be allowed to slip much more. We are already assuming some level of risk, and that is before we learned about the things that we have going on in contested environments. We do not plan for losing tankers. And if we do not recap them, any loss is more catastrophic.

24 Senator Shaheen: Thank you. I certainly agree with 25 that.

1 I know that when we were in Afghanistan and Iraq, one of the challenges that we had at the height of those 2 conflicts has been the ability to have our fuel keep up with 3 4 the actions that were going on in the field. One of the 5 things that I think the military has done an excellent job 6 of is research into alternative ways to make us less dependent on those fuel lines and particularly foreign 7 8 sources of oil.

9 Can you talk a little bit about how you see the 10 importance of those alternative fuels as you are looking at 11 TRANSCOM's future?

General McDew: Senator, I believe that a level of resilience across the entire portfolio is needed. The ability to have different sources of fuel, the ability to have different methods of delivering that fuel, DLA and all of our partners really work hard at that. I think it is important that we cannot just be relying on one source for anything.

Senator Shaheen: And are you concerned about the progress that they are making? How are we doing? Is there any branch that is falling behind that we need to be worried about?

General McDew: You know, with technology, always faster is better. But sometimes, the journey is important as you are going down new innovative paths.

1 So I cannot tell anybody that is falling behind. But I 2 think research and development on different ways of doing 3 fuel is going to be important.

Senator Shaheen: And just following up a little bit on 4 5 the cyber concern, what more can we do on this committee to 6 support the efforts to address both the intrusions and the cyberattacks that we are seeing? And how can we help 7 8 encourage the private sector that we are relying on to come to the table? Do we need to give you more authority? Do we 9 need to take action that is going to address the private 10 11 sector? What should this committee be looking at to support 12 your efforts?

General McDew: I would ask, Senator, that this committee and all the committees in the Congress, as well as the American public, become as paranoid about the cyberthreat as I have become.

Senator Shaheen: Oh, I think we are pretty paranoid,actually.

19 General McDew: I am not sure in the commercial 20 industry that every CEO sees the cyberthreat as something 21 beyond their commercial viability, and I am not sure every 22 CEO understands that it is CEO business and not the IT 23 department's business.

Senator Shaheen: Thank you, a very importantobservation.

1 Thank you, Mr. Chairman.

2 Chairman McCain: Senator Rounds?

3 Senator Rounds: Thank you, Mr. Chairman.

General McDew, thank you for your service to our country.

A unique and significant part of the Nation's air mobility resource is the Civil Reserve Air Fleet, as the chairman has indicated, commonly referred to as CRAF. The average American may be surprised to know that, in 1991's Operation Desert Storm, 60 percent of all deployed troops and 25 percent of all cargo airlift went by commercial carriers, not military airlift.

At the time, the Air Force had about 330 C-5s and C-14 141s for strategic airlift. Today, your posture statement 15 says the CRAF requirement has grown from 60 percent to 90 16 percent for all passengers, and from 25 percent to 40

17 percent of all cargo.

18 Meanwhile, the latest numbers that I have been shown, 19 there are roughly 280 C-5s and C-17s in the inventory for 20 this mission. This reduction of 50 aircraft since 1991, 21 combined with the erosion of sealift availability, tells me 22 that our ability to project military power is increasingly tied to our commercial air segment, blurring the lines 23 24 between military and nonmilitary organizations required for 25 national defense.

1 Specifically, you have noted that one of the greatest 2 challenges that TRANSCOM faces is from cyberattacks. 3 Because it is not a DOD entity, the Civil Reserve Air Fleet 4 resides outside the direct reach of CYBERCOM. How can we 5 make certain that this fleet receives the same level of 6 cyber defense as our strategic air units?

General McDew: Right now, I have no mechanism to 7 8 ensure that that can happen. I do not have the authority to compel a commercial industry to bring their standards up to 9 the level that we have inside, nor are we assured exactly 10 11 what that standard is. We do know that inside the 12 Department of Defense, USCYBERCOM and others have established a standard that we believe that our networks are 13 14 protected. Outside, I guarantee you that every CEO thinks 15 that they have the level that they think they need. 16 Reconciling what they think and what the reality is is 17 important.

18 Sharing information across from DOD to commercial 19 industry, the Federal Government to commercial industry, is 20 one. I can talk to CEOs, and I have talked to some that 21 have no idea that they have been attacked. That is a 22 problem.

23 So before you can ensure that they are protected, they 24 have to have the wherewithal to know that they have been 25 attacked.

1 Senator Rounds: The Department of Homeland Security, which is charged with protecting critical infrastructure, 2 3 defines it as the assets, systems, and networks, whether physical or virtual, so vital to the United States that 4 5 their incapacitation or destruction would have a 6 debilitating effect on security, national economic security, national public health or safety, or any combination 7 8 thereof.

9 My question, I guess, would be, given our significant 10 reliance on CRAF, would you consider it to be critical 11 infrastructure?

General McDew: I would, and I would also broaden the definition. There are many more things, because of the risk we have taken in the portfolio over the last couple decades, many more things are in the private sector. All of those things I rely upon for national security, and many of those things are not thought of that way on a regular basis.

Senator Rounds: Are there any other nonmilitary elements critical to TRANSCOM's mission that you would consider critical infrastructure?

General McDew: Critical, I do not want to get into the actual definition of critical, but there are elements of commercial, everyday use -- road, rail, seaports -- that are all critical. When we need to go to war as a Nation, they are all critical.

Senator Rounds: What interaction does TRANSCOM have with the Department of Homeland Security regarding such infrastructure?

General McDew: Most of our links are through the
Department of Transportation. We do have links to the
Department of Homeland Security. We meet regularly. I have
a liaison officer from both the FBI, and we work extensively
with the interagency.

9 The problem is, I do not know if we have sung loud 10 enough. We have just learned a number of things ourselves 11 over the last year about how vulnerable we are. We have 12 learned some things over the last year on how we can protect 13 ourselves better. Now we are able to be a better partner, I 14 believe, in the interagency.

15 Senator Rounds: General, thank you.

16 Thank you, Mr. Chairman.

17 Chairman McCain: Senator Hirono?

18 Senator Hirono: Thank you, Mr. Chairman.

19 General, it is good to see you. Thank you for your 20 service.

I want to talk about Red Hill. The Red Hill Bulk Fuel Storage Facility at Joint Base Pearl Harbor is a key component of the Navy's operations in the Pacific and Asia to provide secure underground fuel storage for ships and aircraft, and it is of vital strategic importance.

For anyone who is not visited the Red Hill Bulk Fuel Storage Facility, it is massive. And the engineering feat to create that facility is on the order of Hoover Dam, so we are talking about a huge facility.

5 Can you discuss the impact that this secure storage 6 facility has on the reliability and resilience of refueling 7 in the Pacific? And what would happen if this facility were 8 closed?

General McDew: I cannot speak directly to that one.
That would be more in the purview of DLA and partners at the
Defense Logistics Agency.

However, anything that lessens our ability to have fuel available in the Pacific region is detrimental to our ability to go to war.

Senator Hirono: Have you ever visited this facility?General McDew: Not directly, Senator.

Senator Hirono: If you ever get to Hawaii, please doso. I am sure you do get to Hawaii. Please do so.

19 The Air Force has been using Active Associate Units for 20 many years. These can be very strong units showing the 21 collaborative capabilities of joint Active Duty and Guard 22 organizations.

23 What are your thoughts on Active Associate Units? And 24 could you use more in the tanker and airlift fleet? 25 General McDew: Senator, Active Associate Units have

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been a part of our DNA in the transportation business since the 1960s. They have been a viable way of augmenting and strengthening our ability to provide air refueling, in particular in airlift. I think it is vital going forward that every unit -- and I believe the Air Force has this as part of their plan -- every unit in the KC-46 will be associated in some way. We can do more with many.

8 Some units are better at this than others and have a 9 proven track record. Some need some help. As we go 10 forward, I believe that we will get better and better at 11 doing this in the future.

12 Senator Hirono: Admiral Harris testified before SASC 13 last week that, of the five global challenges that currently 14 drive U.S. defense planning and budgeting, four are in the 15 Asia-Pacific region.

How does tyranny of distance in the Asia-Pacific region impact your planning for the projection of forces and sustainment in the region? And how would those plans be modified if more than one global challenge needed to be immediately addressed in the region?

General McDew: I do not like to disagree with my good friend Harry Harris, and I understand why he focuses on that particular region. I tend to focus on the globe, and there is not one of those problems that is not resident everywhere on the globe.

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And so for my portfolio, it is a global problem. It is a transregional problem. We need to be able to make sure that every combatant commander that has a region understands that they may not be the primary effort, depending on what is happening around the globe.

6 Senator Hirono: So since you look at the threats 7 globally -- and, of course, PACOM represents 51 percent of 8 the world's area. So especially with the threat of North 9 Korea, how do you go about determining what resources you 10 would place with regard to the needs of our combatant 11 commanders?

12 General McDew: We respond to the priorities set by the Secretary of Defense and through the joint staff. So the 13 priority of effort must be set. Right now, the priority of 14 15 effort is providing General Vince Brooks and Harry Harris 16 the resources they need to ensure that they can respond to 17 whatever provocative actions are taken by North Korea. Ιf they are no longer the priority of effort, we swing to some 18 19 other part of the world. We do not have the resources to be 20 everywhere for everybody.

21 Senator Hirono: So you say right now the priority area22 is the DMZ and Pacific Command, Harry Harris?

General McDew: I may have misspoken slightly. So I did say that. I am giving a lot of effort to Harry Harris and Vince Brooks because I know that they have a challenge

1 that they are facing immediately. Scaparrotti, Votel, all 2 of them have issues that they are dealing with, and we try 3 to work around the globe for all of them.

4 Senator Hirono: Thank you.

5 This question has come up before, our reliance on 6 commercial assets for power projection and sustainment. If 7 sea lanes and air lanes are compromised, how will the U.S. 8 either defend our commercial partners or assume a larger 9 role in transportation?

10 General McDew: Senator, one of the reasons that I 11 started calling the commercial industry my fourth component, 12 I have air component, I have an Army component, I have a 13 Navy component, but a very important component that we have 14 not looked at in that way is the commercial industry. Some 15 of my predecessors actually would not even call them our 16 partners, would not say the term out loud. I understand why 17 they did it at the time.

But in today's environment, I have to and must rely on this commercial industry to get things done. So we owe them a better view of their resilience. We owe them a better view of how they are going to contend in contested environments. And we owe that to them in partnering with them.

24 Senator Hirono: So you are taking specific steps to 25 bring them more into an understanding of the challenges that

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1 we face?

General McDew: Absolutely. And through organizations like the National Defense Transportation Association, which most of them are members of, we work on subcommittees to try to get after these problems.

6 Senator Hirono: Thank you.

7 Thank you, Mr. Chairman.

8 Chairman McCain: Senator Ernst?

9 Senator Ernst: Thank you, Mr. Chairman.

10 General, it is good to see you. Thanks for being here. 11 And your grandson I am sure quite lovely. My own daughter, 12 we called her chubbo-bubbo when she was a baby as well.

But thank you for your testimony this morning. I do appreciate you being here.

As a transportation officer, I do have a lot of respect and understanding of the important role that TRANSCOM plays for all of us that have served in uniform, so thank you so much.

19 The risk you describe from the cyberthreats to the 20 refueling shortfalls could have incredible impacts on our 21 national security. I am glad we are addressing those today. 22 You mentioned in your testimony that your tankers are 23 conducting aerial refueling operations every 5 minutes over 24 the skies of Iraq and Afghanistan. When I hear about that, 25 I think about how we are misallocating fourth generation

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fighter jets and tankers to bomb a pickup truck when they
 could be keeping Russia or China at bay.

To me, it highlights why the services need to continue pursuing highly lethal and low-cost solutions in one theater to allow better use of high-cost technologies where they are needed most.

7 Can you describe to me, General, how pursuing more
8 cost-effective tactics on the battlefield can help alleviate
9 some of the stress that we have put on TRANSCOM?

10 General McDew: First of all, Senator, thanks very 11 much. There are a bunch of folks in the cornfields of 12 Illinois right now that loved every statement that you had 13 to say about the wonders of the transporters.

14 What we do, I believe, does keep the 4-plus-1 15 priorities and our enemies at bay. They understand that we 16 still have the capacity to bring a decisive force or an 17 immediate force when needed. I still believe that most 18 adversaries get that. We are challenged in how well we can 19 do it, how long we can do it. But I still believe it causes 20 them pause.

Going forward, how long will it stay that way? Innovation will help us. We have to get after autonomy. We have to get after a lot of different ways that we can use cheaper methods in some regions because we will never have enough resources to place them in every region around the

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1 world permanently.

2 Senator Ernst: Truly. Thank you. I appreciate that. 3 And, General, U.S. special operations teams are some of 4 the most utilized forces against our current enemies. But 5 unfortunately, their remote locations and need for secrecy 6 create quite a unique transportation challenge. As you 7 probably know, the special forces team that led the American 8 invasion in Afghanistan rode in on horseback.

Just tying in with that, what challenges do you face in
TRANSCOM when you are seeking to support our special

11 operators?

12 General McDew: One is to let General Thomas know that 13 I do not have horses.

14 Senator Ernst: No stables, no horses.

General McDew: General Thomas and his team and our team at TRANSCOM talk regularly. We understand that they are in small places with small teams doing big business. So we work very closely with them on both how they contract, how they supply themselves, and we try to make sure that we are giving them the value of our expertise. They do a lot of things well. We do this well.

22 Senator Ernst: Very good. I appreciate that.

You had given some inspiring remarks on innovative thinking last month, telling your servicemembers that you needed true innovation and not just technology. And I do

1 agree with that.

I also agree with your remarks about our failing 2 acquisition system. As you say, taking 10 years to develop 3 a weapons system will leave us behind our adversaries. 4 5 How is that failing acquisition system impacting TRANSCOM? And what can we do a better? 6 General McDew: It is a broad problem as you know, 7 8 Senator. One of the things is it is everything from how we 9 train our acquisition professionals who do the best they can with the tools they are given to giving them better tools 10 11 and then giving them different expectations. 12 Sometimes commanders need to be more involved with setting an expectation for what is going to come out of that 13 14 acquisition process and how quickly, and then sometimes we 15 have to press the system because on the edges of the 16 regulations are opportunities. Maybe we have not explored all the edges, but we do need to get after better training 17 and better tools. 18 Senator Ernst: Fantastic. Thank you, General, for 19 20 being here today. 21 Thank you, Mr. Chairman. 22 Chairman McCain: Senator King? 23 Senator King: Thank you, Mr. Chairman. 24 First, General, I did not know until today that you 25 spent your first 5 years in the Air Force at Loring Air

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1 Force Base.

2 General McDew: Actually, 5.5 years, six winters. Senator King: Five and a half years, six winters. I 3 always knew you were a man of insight, intellect, and 4 5 character, and now I understand where it came from. 6 Aroostook County will do that for you. I also understand Senator Shaheen mentioned --7 8 Chairman McCain: I think we need regular order here. 9 [Laughter.] Senator King: I will not violate Rule 19, Mr. 10 11 Chairman. 12 But I have to mention 101st Air Refueling Wing in 13 Bangor. I was with the chairman in Qatar a couple years 14 ago, and they were proudly serving there. We affectionately 15 refer to them as the Maniacs, and they do a wonderful job. 16 In fact, they allowed me to fly the boom in one of the planes. For some reason, they did not allow me to fly the 17 boom when there was a jet aircraft attached to it. 18 19 General McDew: I appreciate that. 20 Senator King: Yes, I thought that you might want to 21 know that. 22 I know Senator Rounds talked a bit about the cyber 23 issue. I am gravely concerned because, as you have testified, your capacity is very dependent upon commercial 24 25 partners. You said that every CEO says they are safe, and I

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1 do not believe it. I hope that you can do more than admonish them. I would hope that we have these contracts 2 3 with them, which they believe they are profitable, that is why they enter into them, but the contracts, in my view, 4 5 should have conditions that take seriously this threat, 6 because this could be a critical disruption that would absolutely devastate our ability to respond to a crisis. 7 8 General McDew: Senator, one of the first steps we believe is setting a clear cybersecurity standard. That 9 standard has to continue to evolve as we learn more and the 10 11 tools get better in how we defend networks, so it cannot be

12 a static requirement.

13 The next thing we probably need to get to is some level 14 of third-party verification that companies are complying 15 with said standard, and we are not there yet, but we are 16 working with industry right now to try to get after both of 17 those.

Senator King: And testing the system, wargaming or 18 19 testing the system to be sure that it actually will work 20 under a stressful condition, a red team kind of approach, 21 which I know that other areas of the government do, and I 22 think it has been very effective. So that is an area of 23 vulnerability I hope that you will really focus upon, 24 because when we need it, we have to have that commercial 25 capacity there.

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General McDew: Right. Senator, as you know, right now, we have no authority to compel commercial industry to do that, nor am I seeking it. Right now, we are working with them to collaboratively get to a place, and also working with DHS and FBI to try to help them --

6 Senator King: Well, but I would suggest you do have 7 contracts with these folks, and they are getting paid high-8 test U.S. dollars, and that gives you some power to make 9 some pretty serious requirements. I urge you to set your 10 general counsel loose on that issue.

Let me go back to the wargame, which I understand you participated in. Was it successful? Well, I will leave the question at that, and then we will explore the answer.

General McDew: When I first started doing wargames and exercises as a young officer, success was defined differently. As I am a little bit more senior now and have become a senior citizen in the United States military, success is a level of knowledge attained at the end of it that you can do something with.

20 Senator King: Exactly. That was going to be my 21 question. Success is not winning. Success is learning. 22 General McDew: So that journey was so profitable for 23 us as a command that I cannot even put a dollar figure on 24 it. It is now driving everything we think about mission 25 assurance in our portfolio -- everything.

Senator King: Let me ask about a specific problem that
 I think we are all facing, we are certainly facing in the
 Air Force generally, and it faces you both in commercial and
 Air Force -- the pilot shortage, the looming pilot shortage.

5 Isn't that an essentially a kind of logistical 6 challenge? We cannot get troops places if we do not have 7 pilots. And there is a shortage -- Senator Cotton and I are 8 having a meeting on this in the next several weeks -- in the 9 Air Force, but it is happening on the commercial side as

10 well. Is this a concern?

11 General McDew: It is a concern. We are actually 12 showing shortages across several places in our portfolio, from mariners to pilots to truck drivers. Each of those has 13 14 its own problems in the manpower solution area. Right now, the Air Force Chief of Staff and the commander of Air 15 16 Mobility Command are trying to meet with the CEOs of the 17 major airlines to get after how they may partner differently 18 to improve that problem.

19 Senator King: A final question. Are you comfortable 20 with the relationship with the commercial industry on the 21 sealift side, on the air side, that they will be there when 22 we need them, I guess is the question?

General McDew: I am. I am confident, Senator. But I am also confident that they do not know where "there" is. I am confident that we have not fully defined the "there" for

1 them yet enough, and we have not thought our way through, what does it mean to go to war reliant upon this much 2 3 commercial activity in a contested environment? 4 Senator King: I would suggest that wargaming and 5 stress-testing would be very important, particularly where 6 you do not have direct control over these assets. General McDew: We are with you, and we are working on 7 8 it right now. 9 Senator King: Thank you very much, General. 10 Chairman McCain: Senator Tillis? 11 Senator Tillis: Thank you, Mr. Chair. 12 General McDew, thank you for being here. Just to briefly touch on the cyber discussion, if I 13 14 were planning a way to disrupt your ability to play your 15 role in the logistics chain, it would be one of the first 16 places. I would go find a supplier network. 17 If you go back and take a look at the exercise, the 580 Stryker tires, I do not know how much you have in inventory, 18 19 but at that scale, to a large engagement or a large 20 deployment, I would go after whatever that supply chain 21 looks like and try to disrupt their ability to communicate 22 with your organization. 23 The one question I would like to get an answer to, 24 though, is that I think if you are going to try to get --25 you know, it is the weakest link. If the DOD feels

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1 relatively comfortable that they are protecting their systems, that is great. But if major suppliers in the 2 supply chain are vulnerable, then it does not really matter. 3 4 It just means that you are not going to be able to execute. 5 So why wouldn't we start creating, in your acquisitions hat, or with your expertise in acquisitions, a tiebreaker? 6 We have to come up with standards, and I get the third 7 party. I used to be in a firm that did ethical hack 8 9 testing.

10 So you need third party verification, but why not a 11 tiebreaker between potential contractors that depends upon 12 their level of sophistication and impenetrability? And why 13 wouldn't you be seeking the authorities, if it is necessary, 14 for you to have that baked into any kind of acquisition 15 contracts or RFPs or selections going forward?

General McDew: I believe we have the authority right now to bake it in. We may not have the full knowledge on how to bake it in. So we are working on those very things. I have challenged my acquisitions team to some of those very things.

21 What we have found over time, if the commercial 22 industry is my fourth component, it is better to work with 23 them than against them, so we believe that we are working 24 together, maybe not as quickly as we want, so I may have to 25 turn the heat up a little bit.

1 The first heat is to set a clear, definable cyber 2 standard that evolves over time, and then go after third-3 party verification to ensure they are in compliance.

Senator Tillis: Senator King brought up the recent
exercise with the 12 ships, five failures, and I already
mentioned the Stryker tires. I am not sure if just learning
is winning.

8 If you were to scale that, I mean, this is obviously a wargame. This is not the added level of complexity of 9 actually going into a contested area, and that by itself can 10 11 create distractions and probably cause a higher failure rate 12 just because things are moving quickly. And it looks like, based on what I have read, that it did look like it was a 13 14 lack of training on the part of contractors, at least for 15 the Stryker. I am not sure about the ships.

Where are you getting the resources to do that? How do you actually get them trained up to a level to where you can rely on this pretty significant component on contractors? General McDew: Anyplace that we look inside of our portfolio, we are struggling on a regular basis with how you

get beyond what you can do on a daily basis. I have sufficient manpower and expertise to do our job every single day. Under sequestration, we lost some manpower, but we are still sufficient to do that work every day.

25 What we are struggling with right now is our ability to

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think forward, our ability to innovate, our ability to come
 after resiliency standards, and to be resilient ourselves.

3 We have gotten so efficient and lean that some of this 4 stuff just takes more time because you do not have the 5 people there to do it.

6 Senator Tillis: It seems to me, based on some responses to some of the other members, that we have the 7 8 ability for a short-term -- to basically be able to support in a short-term environment. But if we got into a 9 protracted environment, it does not sound like you have a 10 11 high level of confidence that whatever we may be able to 12 perform over some period of time, that we could do it on a sustained basis. Is that fair to characterize your comments 13 14 that way?

General McDew: I think some of it is I am a bit inarticulate. I am trying not to pin myself down by specifying a period of time. "Protracted" is a word that can mean anything to anybody. Is it 1 month, 2 months, 6 months?

In some of the conflicts, depending on the level of classification we can talk, we can go up to 6 months fairly easily. Beyond 6 months, there is a challenge. So it depends on what conflict and what the level of contested environment there is as to how far that protraction can be. Senator Tillis: Thank you, Mr. Chairman.

1 Chairman McCain: Senator Peters?

2 Senator Peters: Thank you, Mr. Chairman.

3 General McDew, it is great to have you here. Before I ask you a few questions, I have to join some of my 4 5 colleagues in giving accolades to Michigan Air National 6 Guard and to our 127th Air Refueling Group out of Selfridge. General McDew: Can I get the chairman to acknowledge 7 8 one thing? During my confirmation hearing, he chastised me because I actually said nice things about all the units as 9 every Senator brought up their units. I have refrained from 10 11 doing that this time.

12 [Laughter.]

13 Chairman McCain: An impressive improvement.

14 [Laughter.]

Senator Peters: Well, I will give those accolades, and I appreciate your nod. They are doing a great job, General. My question is, China has made significant investments globally in ports and railways. By some estimates, China has some degree of investment in nearly two-thirds of the world's top 50 ports, which handle 67 percent of the global container volume.

The Committee on Foreign Investment in the United States, or CFIUS, reviews transactions that result in control of U.S. businesses by foreign entities to determine if there could be an impact on national security. But CFIUS

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1 does not have a role if there is not a U.S. nexus for an 2 investment, merger, or takeover.

I know you have a very deep understanding of the link between investments in strategic assets and U.S. national security. But my question is, should analysts in the U.S. Government and military pay more attention to foreign investment in strategic assets like ports around the world? General McDew: Yes, Senator.

9 Senator Peters: Could you elaborate, please?

10 General McDew: In my business, I did not know the two-11 thirds number, but I do not see many ports around the world 12 where the Chinese are not investing. I know that on one 13 level in this country, we are linked economically, and they 14 are not an adversary today, but they have the potential to 15 be one in the future.

Anybody that is investing globally in ports, and if we are a maritime Nation, we ought to be concerned about their feelings about freedom of access and how we operate around the globe, and they have not shown that freedom of access means the same to them as it does to us.

21 Senator Peters: So are you concerned then about the 22 potential for strategic investments by other nations could 23 have on your ability to operate? Is that what I am hearing 24 from your answer?

25 General McDew: I am and that is one of the reasons

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that I spend a great amount of my time traveling around the world, in particular working with the State Department, strengthening relationships that we have in countries, and having them fully understand why those relationships are important, and their ports and their rail infrastructure are important to us.

7 Senator Peters: We have talked a great deal about some 8 of your challenges in terms of capacity to move both fuel and heavy material with sealift operations. If you could 9 10 talk a little bit about pre-positioned forces and the 11 importance of that? Certainly, that is one way to deal with 12 the challenges of moving something from A to B, is to already have moved it to B prior to a conflict. We have 13 14 challenges in Europe to move heavy material, should we see 15 increased aggressive behavior there, certainly with what is 16 happening in Korea as well.

Please discuss the importance of pre-positioned forces.
And do you believe that perhaps we should consider
increasing the amount of pre-positioned equipment in various
strategic locations?

General McDew: I believe, first, Senator, we need a clear strategy of what we want to achieve in a particular region. That strategy then needs to be informed by the resourcing to do whatever that strategy would call us to do. Pre-positioning forces have always been important

resources for us. They have become more important as we have withdrawn forces from places around the world and brought them back into the CONUS, because now we are a projecting force. With that, as you said, having stuff already at B is very, very helpful.

6 To ensure that each one of those stocks is fully 7 upgraded -- i.e., is it new equipment? Is it equipment that 8 has at least been tested? Is all of the equipment set 9 there? All of that is important, and it all plays together. 10 Senator Peters: Thank you, General. I appreciate it.

11 Chairman McCain: Senator Cruz?

12 Senator Cruz: Thank you, Mr. Chairman.

13 General, thank you for your service and dedication to 14 the country.

Last week, Admiral Harry Harris addressed the resources requirements to conduct military operations in the Asian-Pacific in the event of hostilities. He told this committee that he had the forces in place to "fight tonight, if necessary," but that what concerned him was the "follow-on resources" and how those follow-on resources would get to the region in terms of airlift and sealift.

General, do you share Admiral Harris' concerns? General McDew: I believe that Admiral Harris has a right to be concerned because it is his AOR. And I believe that he has a point to be made in that any time we have to

project a force, we ought to be concerned about how it is
 going to get there.

We are no longer assured that everything that we send from the CONUS will arrive at its point of destination. It could be because it is old. It could be because of weather. It could be because the enemy had a vote. So I am concerned.

8 Now, from my discussions with him and with General 9 Vince Brooks, the immediate follow-on forces that he needs, 10 we are ready to send.

11 Senator Cruz: So what most worries you with respect to 12 our ability to flow resources into the Asia-Pacific theater? General McDew: Our ability to rely upon the commercial 13 14 industry, which we will have to rely on over time, and how 15 long the environment remains contested and to what level. 16 Each of those are a bit of unknowns, and how we will 17 maneuver through that space is going to be vitally important for how long protraction is and what protraction will mean. 18 Senator Cruz: So let's shift to a different topic. 19 20 In the past decades, the United States has had the 21 luxury of having secure air and sea lines of communication. 22 Given the increasing anti-access/area denial efforts of 23 China, there is a chance we could be denied that luxury in a 24 future conflict.

25 A recent article by Dean Cheng, a senior fellow at the

Heritage Foundation, posited that, "The ability of the Chinese to deploy substantial forces into the central Pacific would place American logistics and support forces at risk. The loss of one or more underway replenishment ships would rapidly curtail the ability of the American surface forces, including aircraft carriers, to operate."

7 What is TRANSCOM's plan to replenish ships and aircraft 8 in the event that we must fight our way into an area where 9 anti-access/area denial has succeeded?

10 General McDew: Senator, without getting into too much 11 level of classification, I can tell you that we are in new 12 territory. As you said, we have not been in this place in decades. And so I believe that the Navy, in particular, the 13 14 Air Force, are both working on plans that get back to 15 dominating those domains, but realizing that the logistics 16 infrastructure has not been challenged for so long, it is just a new place for us, and we are having to go after that. 17 I believe that we are making progress, not as fast as 18 19 we all want.

20 Senator Cruz: On another topic, one of the critical 21 backgrounds of Air Mobility Command is the tactical airlift 22 capacity of the C-130 Hercules. The 136th Airlift Wing, 23 part of the Texas Air National Guard, and you are free to 24 defy the Chairman and praise them vociferously, is flying C-25 130Hs and performing extraordinarily well.

You expressed concern in your House testimony last month that, "Continued modernization efforts in our C-130H fleet must be prioritized as a relatively inexpensive means of maintaining critical capacity."

5 Could you expand on those sentiments? 6 General McDew: I believe that one of the things we 7 have to look at as we look at our tactical airlift 8 capability is to ensure that all of those units that fly 9 those airplanes have the wherewithal to fly in the new 10 airspace and are modern enough to continue to be a viable 11 resource.

I was an old C-130 pilot myself. I flew E models. If anyone had E models today, I would say that we need to retire them all until they are all gone.

Depending on which level of H, it is just a matter of a software upgrade, so I believe we are okay. I would make sure that we are not overprioritizing C-130s to the detriment of takers right now, because that is a higher priority need for me.

20 Senator Cruz: Thank you, General.

21 Chairman McCain: Senator McCaskill?

22 Senator McCaskill: Thank you, Mr. Chairman.

Good to see you, General. I know well that cornfield you referenced. It looks familiar since it is right across the border. I understand the importance of Scott Air Force

Base not just to TRANSCOM and our military but to the region in St. Louis. And I am a big fan of all the work you do there, and I am pleased that we are having this hearing today.

5 Let's talk a little bit about contested environments 6 and airlift in contested environments. Since my colleague from Texas was talking about his unit, I know you know I am 7 going to mention the 139th, because, as you are well-aware, 8 this is an international training school for resupplying 9 contested environments. That is obviously Rosecrans, once 10 11 again, right in the heart of America. We call it the top 12 gun of airlift. I think that is an accurate description since I have run into people who have been trained at 13 14 Rosecrans literally all over the world, particularly when I 15 have been to Iraq and Afghanistan.

16 Could you talk a little bit about the plan for testing 17 new equipment that we are going to have dedicated training 18 rather than having to pull these aircraft out of units for 19 training that they are trying to site for C-130Hs, each a 20 different variant, with a training wing?

We are hopeful, obviously, that that would get sited at St. Joe because of the inherent capabilities we have and the advantage of the location and the already international clientele we have in terms of our allies getting trained in this important resupplying in contested environments.

1 Talk to me, if you would, about the 139th Airlift and 2 the training that goes on there, and what your view is of 3 that capability in terms of training in contested 4 environments?

5 General McDew: I believe that the instructors that we 6 have at Rosecrans are some of the best in the C-130 7 business. They have a lot of experience. They have been 8 flying the airplane for a long time, and they are steeped in 9 tactics, techniques, and procedures for the aircraft. So it 10 is a resource that we have to rely on as we go talking more 11 broadly about contested environments.

I have tasked Air Mobility Command to lead a contested environment summit. I would hope, and I have to believe, that they will have Rosecrans members there to help us get after solutions to our contested environment wargame level of learning.

We have learned a bunch of things that should scare us.
Now we are going after what we do about it and how we fix
and mitigate some of these concerns.

20 Senator McCaskill: Let me talk a little bit about your 21 testimony, which I found stunning, the shortage of 75,000 22 licensed drivers in the trucking industry, and understanding 23 how important this is for our capabilities in terms of 24 supply and resupply.

25 The projected shortfall is due to increase to 890,000

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drivers by 2027. The current shortage has the trucking industry operating at a 95 percent capacity every day, which basically leaves no surge capacity for high-volume DOD requirements in a time of conflict without severely disrupting commercial services across the country, which is a whole other price we would have to pay in our economy if that were the case.

8 While I want to make sure that we are making it as easy 9 as possible for trained military to transition into civilian life, and, obviously, we have a lot of great truck drivers 10 11 that are trained in the military -- once again, trained in 12 my state at Fort Leatherwood -- I am worried that even if we put every single truck driver we train in the military into 13 the civilian trucking industry, we are still not going to 14 15 have enough.

16 So let me ask you, have you all looked -- I worry about driverless trucks, in terms of what it is going to do to 17 jobs in this country. But have you all began to talk about, 18 19 in the future, the use of driverless trucks in this 20 capacity? And could you speak to that for a few moments? 21 General McDew: Senator, we have actually looked at 22 autonomy across a broad portfolio, from ships to trains to 23 trucks to airplanes. We believe that you must have that 24 level of technological advancement as you go forward. 25 Somewhere along the way, we are losing the young men

and women who grew up wanting to be truck drivers and
 airplane drivers and train drivers. And so with a lack of
 capacity, the technology will have to take over. We just
 have to have this technology going forward.

5 And I believe the advances being made by some in the 6 civil sector is pretty impressive.

Senator McCaskill: It is. And I know that we havesome autonomous buses going now and other trucks.

9 Have you reached out to some of the companies doing 10 this to see if it would be possible for you all to do some 11 pilot work, maybe over on the base at Scott, to begin to get 12 your arms around what driverless trucks would feel like in 13 terms of your need to supply our troops?

General McDew: Most of that work is being done in the services, in the organized train and equip role. The Army is working a lot on autonomous vehicles. The Navy has some autonomous vehicles. And the Air Force is also working with some semiautonomous and autonomous work through DARPA.

19 Senator McCaskill: Great.

20 Thank you, Mr. Chairman.

21 Chairman McCain: Senator Warren?

22 Senator Warren: Thank you, Mr. Chairman.

23 Thank you for being here, General.

I want to quickly ask about the importance of our nonmilitary agencies and assistance to your mission.

1 TRANSCOM maintains a presence around the world, and we 2 need other countries, ports and rail and road networks to be 3 upgraded and to be secure, so that those countries can 4 receive our military equipment. And we rely on diplomatic 5 agreements with other countries for our pre-positioned 6 equipment.

So I just want to ask, General, would a reduction in funding to the civilian agencies and programs that enable your global distribution networks make your job easier or harder?

11 General McDew: Senator, our job as a co-com with 12 global responsibilities relies on every partner we can get 13 our hands on. One of our biggest partners is the State 14 Department, and a lot of interagency partners around the 15 globe, because they help us build relationships in the areas 16 that we cannot be at on a regular basis. And you cannot 17 build a relationship when you need a relationship.

18 Senator Warren: Right. So I take it the answer is, it 19 would make your job a lot harder.

20 General McDew: It would make it a little harder.

21 Senator Warren: It would make it a little harder. I 22 agree with this, and I point out that the administration is 23 seeking significant reduction to the Department of State and 24 to USAID.

25 Of course, our military is critically important to our

security, but we cannot forget that nonmilitary programs are
 critical enablers of the military to do the jobs that you
 need to do.

Now, General, I also want to ask you another question.
When you testified in front of the House Armed Services
Committee several weeks ago, you said that getting C-5s out
of the backup inventory was your number one priority for the
NDAA. The upgraded C-5 is currently our only cargo aircraft
that can make a transcontinental flight without refueling.

10 So, General, would having those additional C-5s back in 11 inventory help mitigate your aerial refueling challenge by 12 providing more capacity to move cargo without needing to 13 refuel?

General McDew: I believe we can also do a transcontinental flight with a C-17. But the C-5s, we need those additional C-5s back in the inventory. I believe the Air Force has just recently committed to doing that over the next few years, so that will be very, very helpful.

Senator Warren: All right. Can you just expand just a little bit on the importance of the C-5? Why the C-5 is a critical piece of equipment for you to get your job done? General McDew: It is the totality of the mission set. First, we have limited numbers of strategic assets. The C-5 provides an outsized cargo capability and a longrange capability. Having been on the receiving end at a

1 deployed location of a C-5's stuff, there is nothing like a
2 C-5 load full of the stuff arriving time after time after
3 time if you are standing up an operation quickly.

Senator Warren: Right. I understand it is the only
aircraft that can carry two Abrams tanks, or that it can
carry six helicopters simultaneously.

7 So I take it that is a good boost to efforts on the 8 ground.

9 General McDew: That is a good thing.

10 Senator Warren: That is right. Good.

11 Well, I just want to say, making sure that we have 12 every available C-5 seems pretty important to me, not to 13 mention the fact that we have invested a lot of money to 14 upgrade them, and now they are sitting on the ramp. The 15 economics of that just do not add up.

Westover Air Reserve Base in Massachusetts has eight of these aircraft, and the people there tell me that these planes are in use pretty much all the time, and I am sure they would welcome additional C-5s to be able to work on their mission.

21 So thank you.

22 Thank you, Mr. Chairman.

23 Chairman McCain: Senator Blumenthal?

24 Senator Blumenthal: Thanks, Mr. Chairman.

25 Thank you, General, for your service. I would like to

focus a little bit on a topic that has been raised before,
 the cyberthreat, and ask specifically about your experience
 so far with some of the contractors.

4 Are they required to report to you incidents or 5 episodes of attacks, cyberattacks by a nation-state? 6 General McDew: I believe that is a Federal requirement, but they are required to report. 7 8 Senator Blumenthal: And do they report to you? 9 General McDew: I believe they report to an organization called DC3. I am trying to remember. I have 10 11 to get back to you on what that stands for. We speak in 12 acronyms, and sometimes we forget what the acronym actually stands for. But they actually report through an 13 organization I believe that is part of DHS. 14 15 Senator Blumenthal: Part of what, sorry? 16 General McDew: Department of Homeland Security. 17 Senator Blumenthal: So they do not report to the Department of Defense? 18 19 General McDew: Not that I am aware of. 20 Senator Blumenthal: But they are under contract with 21 Department of Defense. 22 General McDew: Right. 23 Senator Blumenthal: Why aren't they reporting to you? 24 General McDew: Let me be more clear about that 25 afterward. I will get back to on the record for that. I am

1 trying to remember exactly the reporting chain. The 2 reporting requirement may be dual, and I do not want to 3 misspeak.

Senator Blumenthal: I am somewhat surprised that they
are carrying out an essential national security and defense
mission; they are under attack, just as they would be as if
they were conducting a convoy in Afghanistan; and the
Department of Defense is not informed directly.

9 General McDew: Well, part of it, Senator, is "attack."
10 Let's talk about "attack" for a second.

Let's say today, and I hate to name a company, because it will get somebody in trouble. If someone is not necessarily contracted with us and they get attacked, that is the same as if they are actually contracted with us and they get attacked.

16 So I do not care where they report to, because if an 17 adversary gets on their network and stays on their network, 18 it does not matter whether they are actually doing my work 19 at the time when the adversary moves laterally through their 20 network and potentially invades my network.

21 Senator Blumenthal: And that is exactly the reason, 22 General, why I think they should be reporting to you, 23 because even if they are attacked -- well, let me put it 24 differently. It makes no difference whether they do 25 civilian as well as military work. If they are attacked, it

1 is an attack on a network that is performing national 2 security military work and potentially not only undermines 3 the function they do for you but gains entry into your 4 computer networks --

5 General McDew: Absolutely.

6 Senator Blumenthal: -- the Department of Defense 7 computer networks. So I am somewhat at a loss to know why 8 they are not instantaneously telling you, we have been 9 attacked by Russia or China.

10 General McDew: Part of it is I cannot do anything 11 about it. This organization that they would report to has 12 partnerships and alliances with the Department of Defense. 13 So the Department of Homeland Security in their role to have 14 the non-DOD side of cyberdefense is partnered with DOD and 15 CYBERCOM.

So that organization that would respond to an attack is linked that way. My organization would be interested to know that that company has been attacked, but we would rely on others to do something about it. We would like to know because then it would tell us what we could do with that organization going forward.

22 Senator Blumenthal: Well, I would think for a variety 23 of reasons you would like to know. Have you ever asked? 24 And have you ever sought that information?

25 General McDew: So that information-sharing is what I

am really talking about. We have good information-sharing in some areas. It can be better across the entire spectrum, because most of the time, the attack or the intrusion takes place and no one thinks it is an attack or an intrusion. It can look like a harmless mechanical failure.

6 Senator Blumenthal: Let me ask you this. Would you7 like that information directly?

General McDew: I think I do need it directly. I do
not need it as quickly as CYBERCOM needs it or DHS needs it,
but I need the information.

11 Senator Blumenthal: You do need to directly.

12 General McDew: Right.

Senator Blumenthal: When you talk about it, you do not need it as quickly, if it is made available to them, it can be made available to you.

16 General McDew: Absolutely.

17 Senator Blumenthal: Thank you, Mr. Chairman.

General McDew: And the unfortunate thing, Senator, is that the speed of this domain does not comport well to how we do information-sharing. Things happen so quickly, and we have to not think about sharing. We just have to share in a classified way.

23 Senator Blumenthal: Thank you.

24 Chairman McCain: General, all I can say is that we 25 need to share. We also need to have an ability, either your

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1	organization or someone, to respond and to try to prevent,
2	which is one of the major issues that this committee is
3	having to address since certainly the last administration
4	did not.
5	Jack?
6	Senator Reed: No, sir. I am fine.
7	Chairman McCain: Thank you, General.
8	General McDew: Thank you, Chairman. Thank you.
9	[Whereupon, at 10:56 a.m., the hearing was adjourned.]
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