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**CONTRIBUTING FACTORS TO C-130  
MISHAPS AND OTHER INTRA-THEATER  
AIRLIFT CHALLENGES**

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HEARING

BEFORE THE

SUBCOMMITTEE ON SEAPOWER AND  
PROJECTION FORCES

OF THE

COMMITTEE ON ARMED SERVICES  
HOUSE OF REPRESENTATIVES

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## **CONTRIBUTING FACTORS TO C-130 MISHAPS AND OTHER INTRA-THEATER AIRLIFT CHALLENGES**

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HOUSE OF REPRESENTATIVES,  
COMMITTEE ON ARMED SERVICES,  
SUBCOMMITTEE ON SEAPOWER AND PROJECTION FORCES,  
*Washington, DC, Friday, September 28, 2018.*

The subcommittee met, pursuant to call, at 9:02 a.m., in Room HVC-210, Capitol Visitor Center, Hon. Robert J. Wittman (chairman of the subcommittee) presiding.

### **OPENING STATEMENT OF HON. ROBERT J. WITTMAN, A REPRESENTATIVE FROM VIRGINIA, CHAIRMAN, SUBCOMMITTEE ON SEAPOWER AND PROJECTION FORCES**

Mr. WITTMAN. We will call to order the House Armed Services Subcommittee on Seapower and Projection Forces. And today, the subcommittee convenes to receive testimony on contributing factors to C-130 mishaps and other intra-theater airlift challenges.

The distinguished panel of Air Force and Navy leaders testifying before us today are Lieutenant General Jerry D. Harris, Deputy Chief of Staff for Strategic Plans and Programs, Department of the Air Force; and Lieutenant General Donald Kirkland, Commander, Air Force Sustainment Center, Department of Air Force; and Rear Admiral Scott D. Conn, Director, Air Warfare, Office of Chief of Naval Operations, Department of the Navy.

Gentlemen, thank you so much for being here with us today. We deeply appreciate your time and your viewpoints.

Recently, there have been an alarming rise in noncombat aviation accidents. From fiscal year 2013 to 2017, manned fighter, bomber, helicopter, and cargo warplane accidents rose nearly 40 percent, resulting in the loss of life of over 130 service members in aviation mishaps.

Of these incidents, over 20 percent of fatalities occurred in three accidents involving legacy intra-theater aircraft C-130H Hercules, KC-130T, and C-2A Greyhound aircraft operated by the Puerto Rican Air National Guard [PRANG], U.S. Marine Corps Reserve, and Navy Active Duty, respectively.

Considering these three mishaps involve legacy intra-theater aircraft, it is my fervent belief that the services must do everything possible to ensure the safety of flight. To this end, among the things this committee must consider is the recapitalization and modernization of the oldest and most vulnerable legacy aircraft.

A review of the Air Force's intra-theater airlift portfolio shows that the service is on track to recapitalize its Regular Component units with C-130J aircraft. The Air Force is now recommending

that the Reserve and Air National Guard retain significant capacity in the legacy C-130H aircraft.

To extend the life and relevance of the legacy Guard and Reserve fleet, the Air Force is recommending funding for major modernization programs, such as center wing box replacement, to lengthen service life in addition to pursuing aviation modernization program upgrades to keep these aging aircraft relevant.

This committee has been active in supporting propulsion system upgrades for legacy C-130 aircraft in the Reserve Component by authorizing additional funds for this important effort. To date, the Air Force has not requested this funding in its base budget.

Our review of Marine intra-theater aircraft shows that the service is also on track to fully recapitalize its aging KC-130T fleet with 79 new KC-130J aircraft, to include its Reserve squadrons, to be completed by 2023.

And finally, the Navy begins to recapitalize its legacy K-130T fleet of 25 aircraft by procuring its first 3 new aircraft in 2023. With that said, questions remain as to the level of effort being placed in the pursuit of this program by the Navy and Air Force Reserve sponsors as they seek to balance the needs of competing service priorities.

Additionally, there is concern over how the services respond—or responded to the crash of the KC-130T and PRANG C-130H, with Navy and Marines grounding their fleets and Air Force choosing to continue to fly those aircraft.

And more specifically, this committee is interesting in learning how and why the legacy C-130 propeller systems are serviced differently between the Marine Corps and Air National Guard aircraft at the depots.

George Patton once said, “The more you sweat in peace, the less you bleed in war.” Our most urgent responsibility is to ensure enough sweat is being shed to reduce this bleeding.

With that, I will go to our ranking member, Mr. Courtney, for his opening remarks.

[The prepared statement of Mr. Wittman can be found in the Appendix on page 23.]

**STATEMENT OF HON. JOE COURTNEY, A REPRESENTATIVE FROM CONNECTICUT, RANKING MEMBER, SUBCOMMITTEE ON SEAPOWER AND PROJECTION FORCES**

Mr. COURTNEY. Thank you, Mr. Chairman. And thank you to the witnesses for their testimony here today.

The Seapower and Projection Forces Subcommittee today meets once again to consider a rash of tragic mishaps that have cost the lives of many service members.

In 2017, we held a series of hearings and briefings to consider the causes, consequences, and path forward following four ship collisions and groundings alongside—groundings. Alongside our partners on the Readiness Subcommittee, we conducted frequent oversight of this issue and also guided through a number of reforms in the NDAA [National Defense Authorization Act] on surface ship procedure which, again, we believe will reduce the amount of risk for these kinds of events happening in the future.

As the chairman said, in the last year and a half, unfortunately, we have also seen three fatal mishaps across our Air National Guard, Marine Corps Reserve, and Navy air fleet. Tragically, these incidents have taken the lives of 28 service members. Once again, Congress and military services must come together to assess the causes of these mishaps and to ensure that the right focus is being applied in order to prevent similar mishaps in the future.

As we have learned from the process of reviewing ship collisions and groundings, a single mishap has immediate causes, but a rash of mishaps derives from systemic issues within the force. Fewer flying hours leads to less experienced pilots who are more likely to make mistakes during stressful situations; decreased material readiness of our fleet makes mechanical failure—sometimes catastrophic—more likely.

As we review each individual tragedy, we must be focused not only on what a mishap says about the individual case, but what each mishap can tell us about the state of military aviation overall.

While we are focused here today on the intra-theater airlift fleet, I was glad to see that the full House and Senate, under the leadership of Mr. Thornberry and Ranking Member Smith, included a provision in the fiscal year 2019 National Defense Authorization Act which establishes a national commission on military aviation safety.

This commission will review the rates of military aviation mishaps across the services and across aviation missions, assess the underlying causes of these mishaps, and make recommendations to improve safety training and maintenance and personnel policies.

I hope the testimony here today will help inform and guide the work of this commission as it gets started on this important mission.

I look forward to hearing the witnesses' views on these issues today and yield back my time.

Mr. WITTMAN. Thank you, Mr. Courtney.

I will now turn to our witnesses for their opening statements.

**STATEMENT OF LT GEN JERRY D. HARRIS, JR., USAF, DEPUTY CHIEF OF STAFF FOR STRATEGIC PLANS AND PROGRAMS, DEPARTMENT OF THE AIR FORCE**

General HARRIS. Thank you, Chairman Wittman, Ranking Member Courtney, for the opportunity to appear before the HASC [House Armed Services Committee] Subcommittee on Seapower and Projection Forces.

On behalf of Secretary Wilson and Chief of Staff of the Air Force General Goldfein, I would like to also commend you for the fiscal year 2019 NDAA efforts. If the Congress and the executive branch are able to continue on their current pace, we expect to have a fiscal year 2019 budget on time. First time in decades that's not starting a year with continuing resolution, or worse, a sequester budget. And that's a favorable start for fiscal year 2019. Well done and thank you.

As we review your draft legislation for the fiscal year 2019 NDAA, we all recognize the sacrifices that the American families make to live and enjoy the freedoms in a safe and secure democracy.

With committees like yours as our best supporters and guarantors of that freedom, we recognize the importance of hearings like today on C-130 modernization and safety.

Let me be the first to say that we would like to do more and go faster when it comes to modernization of our C-130 fleet.

We have reduced most of our fleets over the last decade, and the C-130 fleet has been no exception, falling from more than 400 aircraft to about 300 in the Air Force inventory. The C-130 continues to be a workhorse that accomplishes tactical airlift, Antarctic resupply, aeromedical evacuation, natural disaster relief missions, search and rescue, firefighting duties, and support to special operations.

But we have had to make hard choices because of declining budgets, late budgets of the past, sequestration, and new strategies for changing threats.

During this period, we prioritized safety and then compliance, when it comes to operating, maintaining, and sustaining all of our capabilities. We just haven't been able to get to it all.

Readiness, lethality, and cost-effective modernization efforts have guided our plans as we continue to deliver the world's greatest air and space force.

I request our written statements be entered into the record, and I look forward to your questions and our ensuing discussions. Thank you.

[The prepared statement of General Harris can be found in the Appendix on page 25.]

Mr. WITTMAN. Thank you, Lieutenant General.  
Lieutenant General Kirkland.

**STATEMENT OF LT GEN DONALD E. KIRKLAND, USAF, COMMANDER, AIR FORCE SUSTAINMENT CENTER, DEPARTMENT OF THE AIR FORCE**

General KIRKLAND. Chairman Wittman, Ranking Member Courtney, distinguished members of the subcommittee, thank you for the opportunity to update you on legacy C-130 sustainment and readiness.

On behalf of our Secretary, the Honorable Heather Wilson, and our Chief of Staff, General David Goldfein, I appreciate your continued support and demonstrated commitment to our airmen, Air Force civilians, our families, and veterans.

As I attest in my written statement for the record, the C-130s are safe, effective aircraft for its missions, and we have programs in place to ensure these conditions going forward. We take our responsibilities for our people and our mission very seriously.

Earlier this spring, General Goldfein directed all wing commanders and operational maintenance leaders to conduct a one-day operations safety review. Commanders focused on assessing processes and looking for areas of improvement to prevent future mishaps. Our service members and citizen airmen are our greatest asset. We are absolutely committed to their safety as we continue to deliver combat power to our combatant commanders.

On the sustainment front, this year we began a consolidation of all C-130 program depot maintenance workload currently at the Ogden Air Logistics Complex in Utah to the Warner Robins Air Lo-

gistics Complex at Robins Air Force Base, Georgia. This transition will be completed by fiscal year 2022.

Because all three of our complexes operate as an enterprise, our Air Force will be able to achieve efficiencies and greater economies of scale.

Thank you, and I look forward to your questions.

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

Mr. WITTMAN. Thank you, Lieutenant General Kirkland.

I will now go to Rear Admiral Conn.

**STATEMENT OF RADM SCOTT D. CONN, USN, DIRECTOR, AIR WARFARE, OFFICE OF THE CHIEF OF NAVAL OPERATIONS, DEPARTMENT OF THE NAVY**

Admiral CONN. Chairman Wittman, Ranking Member Courtney, and distinguished members of the subcommittee, thank you for the opportunity to appear before you today and discuss the Navy's intra-theater airlift plan.

The Navy provides continuous forward-deployed maritime strike and expeditionary power projection force. Supporting that force requires a unique logistics infrastructure.

Due to the distributed nature of naval operations, logistics support includes inter-theater lift that bridges the gap between the joint force provider of aerial ports of debarkation to those fleet logistics sites around the globe. We call this capability the Navy Unique Fleet Essential Airlift, or NUFEA.

Operated entirely by the Navy Reserves, NUFEA consists of 24 C-140Ts, 15 C-40 aircraft, and provides the responsive, flexible, and rapidly deployable air logistics to support necessary combat operations from the sea.

The C-40A leads the NUFEA fleet in range and capacity, able to carry in excess of 36,000 pounds, 121 personnel, or a combination of both. And it is the only medium-lift aircraft that's able to transport hazardous cargo and personnel at the same time.

Thanks to congressional support, the Navy will now field its last two program aircraft in fiscal year 2019, to complete a program record of 17 aircraft.

The C-130T fills the NUFEA requirements for medium-lift and outsized cargo. It is the only Navy aircraft capable of moving all modules of the F-35 engine.

Additionally, the C-130T provides unique capability, delivering passengers and cargo to austere locations, including unprepared fields and runways less than 3,000 feet. And in light of the landscape that we are in right now strategically, that's probably an important capability that we need.

The Navy completed the procurement of the C-130Ts in 1996. We are now looking to recapitalize our effort, beginning with advanced procurement in 2019, buying three aircraft, as you said, sir, in fiscal year 2023.

But it is not just recapitalizing. It is the modernization of the aircraft; we have to keep them relevant.

In fiscal year—or PB [President's budget] 2019, there's \$28.5 million for avionics, communications, and obsolescence upgrades to keep the aircraft compliant with FAA [Federal Aviation Adminis-

tration] and ICAO [International Civil Aviation Organization] standards to able to—in the air traffic control management systems across the world.

Additionally, of the \$121 million that Congress adds for the NP2000 props [propellers] to be able to—to get us out of “Red Stripe” as well as getting the—the new legacy blades that we are getting from Warner Robins, in concert we will have all the aircraft up by fiscal year 2019 and all the aircraft converted to the NP2000 by fiscal year 2020.

That is—there was also \$8.9 million to update the carbon brakes that Congress gave us through NGREA [National Guard and Reserve Equipment Appropriation] funds for our Reserves to improve the reliability and maintainability of those aircraft.

These modernization efforts are critical to maintain the Navy logistics support to our deployed forces. As I said, we began advanced procurement in fiscal year 2019 to recapitalize our KC-130Js, with three aircraft being bought in 2023.

If the budget changes, budget profiles changes in subsequent budget cycles, we may have to revisit whether we continue to recapitalize or modernize; based on those budget levels, that decision will be made for—at a different time.

As people and parts arrive to our fleet logistics sites via the NUFEA aircraft, they are transferred to one of our Navy’s 34 C-2 aircraft, that completes that last tactical mile to get those parts and people out to our carrier strike groups.

C-2A is over 30 years old. We have our maintenance material condition challenges associated with that. We are addressing those, but we are also looking to recapitalize that aircraft for our CMV-22.

Initial plan was to sundown the C-2 in 2027. With the help of Congress, with additional adds, we have been able to push that left to fiscal year 2024. CMV-22 will IOC [initial operating capability] in the Navy in 2021, and that is mapped to our first F-35 deployment for those engine considerations, and we will continue to transition to be transition-complete by the end of fiscal year 2024.

Mr. Chairman and Ranking Member Courtney, distinguished members, thank you for their—your leadership and the support of this subcommittee to provide the resources that enable our sailors to do their job. On behalf of the men and women working tirelessly to protect American interests at home and abroad, I thank you for the opportunity to discuss Navy inter-theater lift plans, and I look forward to your questions.

[The prepared statement of Admiral Conn can be found in the Appendix on page 43.]

Mr. WITTMAN. Rear Admiral Conn, thank you. Thanks so much for your comments on the Navy’s efforts there with KC-130T.

Lieutenant General Kirkland, I want to start with you. It is my understanding that the KC-130T, the Navy version, and the C-130H, Air Force, both have their propulsion system as well as other depot-level maintenance done at Warner Robins Air Logistics Center.

I do understand that both the Navy and the Air Force have taken a different approach to propeller assemblies, so I wanted to—to dig down a little bit into that, and could you explain to me what

steps have been taken to consolidate those efforts, and what we are doing to upgrade propeller assemblies?

And has the Air Force and Navy response or their efforts in addressing propeller assemblies, has that led to a difference in how they responded to these recent accidents? And what do you think is the outcome of where we are now with the safety of those aircraft, based on this depot-level maintenance?

General KIRKLAND. Chairman Wittman, thank you for that question. I will address both those in turn.

Sir, you are aware that the—Warner Robins Air Logistics Complex it is a single, complete, overall facility for all 54 H-60 four-bladed propellers. That's the one used on the Air Force C-130H and its variants, Navy, Marine Corps, C-130T, KC-130T aircraft, and a slightly different version of the propeller is used on the Navy's P-3.

The differences in the manuals evolved due to incorporation of changes. These updates to technical manuals occur frequently. Their purpose is to correct errors or include process improvements that we have learned or identified during maintenance.

And although the Warner Robins technicians were trained on all manuals, and although there was collaboration and coordination between Navy and Air Force C-130 program offices, there was no formal effort to ensure respective changes were synchronized between the two services in their manuals.

Last fall, our Air Force program executive officer responsible for the C-130 formed an independent review team [IRT]. The IRT was formed to guide development of updated propeller overhaul requirements. The IRT consisted of members from the Air Force, the Navy, Marine Corps, and members of the aerospace industry.

Additionally, the U.S. Navy Propeller Program embedded an engineer within the Air Force C-130 program office. Based on IRT recommendations, both services' program offices are updating propeller overhaul processes to create a common set of procedures. Overhaul processes updates are complete for all components except for the propeller blade.

Using these updated procedures, Warner Robins began buildup and delivery of the 54 H-60 propellers in March 2018 in support of naval aircraft. These propellers are assembled using new production blades procured from the original equipment manufacturer, who is currently increasing delivery from 30 a month to 48 a month, we believe by October.

Procedures for propeller blade overhaul continue to be updated and refined. Initial validation efforts, which started last April, should conclude this fall, and we expect that Warner Robins depot will reach full production capacity in early 2019.

I would add the Coast Guard is participating in these same efforts and will incorporate those changes in their manuals, and we will also distribute this to partner nations through country-specific technical orders.

With respect to the response, Chairman Wittman, I would focus—it is my understanding the focus was more on the operational impacts that—the differences.

The fleet sizes had something to do with that, but our program office—it is my understanding that our program office made a

value determination based upon the severity of the risk against the probability of occurring, and arrived at a serious risk, and accepted that risk so that the U.S. Air Force may continue to provide the tactical lift that the C-130 provides.

Mr. WITTMAN. Thank you, Lieutenant General Kirkland.

Lieutenant General Harris, I wanted to ask and dig down a little bit deeper on what is happening with some of the upgrades. You know, since 2014, Congress has put additional dollars in over and above the base budget for C-130H propulsion system upgrades, and that includes the T56 3.5 engine upgrade program, the NP2000 eight-blade propellers.

Looking at that, if you look at where it is been applied, the Wyoming Air National Guard has put those upgrades in place and they have seen a 14 percent increase in fuel efficiency and performance increases. And I know currently, the Air National Guard is testing this engine enhancement and propeller upgrade package to see if they can bring additional operational sustainment benefits.

Give me your perspectives. Does the Air Force support these engine and propeller upgrades? And if so, why hasn't the Air Force requested these funds for upgrade kits for the Air National Guard and the Air Force Reserve C-130H fleets? And is there a possibility for the Air Force to prioritize modernization efforts for the C-130H fleet, given its current age and material condition state?

General HARRIS. Chairman, sir, thank you for those questions.

Yes, the Air Force is prioritizing the upgrade of this fleet, but the average C-130 age is 26 years old, and when we look across our fleets, we have got tankers that are pushing 50. We have bombers that are over that age. So as we do a priority across our budget, we have to look at all of the fleets that we operate, and the capability associated with that.

For the congressional adds, we thank you for that. It is giving us an opportunity to study and look at efficiencies and improvements that we can bring into the legacy fleet. We have an ongoing operational utility evaluation that should report out in March of this year to give us the—the information we need to make those decisions.

When it comes to submitting it in a budget as a budget request, our process working through OSD [Office of the Secretary of Defense] and then through the OMB [Office of Management and Budget] effort, we are limited on topline total and I can't ask for everything. So we prioritize across there. We do start with safety first, and then we move through compliance, and our efforts across all of those fleets. And once we have our—the operational utility evaluation out in March, we will have better understanding in how this plays.

We are seeing improvements, as we have said—as you said, sir, the Wyoming Guard unit is seeing an ability to get better efficiencies out of the aircraft, which is certainly something that war-rants do them across our fleet.

Mr. WITTMAN. Very good. Thanks, Lieutenant General Harris.

We will now go to our ranking member, Mr. Courtney.

Mr. COURTNEY. Thank you, Mr. Chairman.

Just really, one quick question to Admiral Conn. Again, you described the replacement program for the C-2 planes. And again,

just for the benefit of people who may be watching this and don't know, maybe, some of the acronyms.

Again, those are the prop planes that, again, deliver people and cargo to aircraft carriers and land with a tailhook. And then, they are going to be replaced by the MV, CV-22 Ospreys, which, again, will land vertically. Is that correct?

Admiral CONN. Yes, sir, it is.

Mr. COURTNEY. Okay. Thank you.

So, again, the plan that you described, you know, clearly the Navy's trying to accelerate that replacement process. These are still extremely old planes, as you and I discussed the other day, the C-2s.

I mean, what I heard from your description is, it is still about a 5-year window, right? For total replacement by 2024, is that?

Admiral CONN. That is correct, sir.

Mr. COURTNEY. Right now. I mean, do you still feel like that's the right plan, given the age of those planes? And you know, obviously you can't spin straw into gold.

But I mean, really, this is your opportunity, if you feel that, you know, that there's a—that that should be something we should be looking at in terms of trying to accelerate it further, you know. I just want to yield the floor to you to talk about that.

Admiral CONN. Yes, sir.

First of all, the C-2 is a cargo aircraft, propeller with an arresting gear that catapults and arrests for landing off the carrier. It is the primary means by which we get cargo airborne, via airlift, out to the carrier—or people, or U.S. mail, to keep our sailors—although, there is the internet now.

But the—it is a 30-year-old airplane. We have gone from 32 percent mission-capable rate in 2017, to a 40 percent in 2018. So the trajectory's in the right directions, but it is nowhere near where we want it to be.

And we are going to continue to make those investments to make sure those aircraft are safe to get airborne until the end of its service life. I have to fully fund that aircraft until I am completely done with it.

The transition plan is the CMV-22, which is the—it is just a modified version of what the Marine Corps flies, but with more fuel and a different com [communications] architecture for blind—beyond-line-of-sight communications.

The range, endurance of the CMV-22 exceeds that of the COD [carrier onboard delivery] when you consider a hot tropical day, fully loaded with 10,000 pounds of cargo, being able to fly in excess of 1,100 miles, which meets our requirements for combat operations.

We have accelerated the sundown of the C-2 from 2027 to 2024. We have our first aircraft being built in Philadelphia today, rolling down the line. That aircraft will deliver in fiscal year 2020.

We then have to do a modified OT [operational test] and DT [development test], and the only thing—the operational tests—the only thing that we are testing are the things different on the CMV-22 as compared to the MV-22. So that's going to be a very compressed test.

We then IOC and get our first three aircraft to deploy in 2021. There is no means by which I can accelerate that any further when you look at the MILCON [military construction], the training that's required for our sailors to operate, maintain, and the aircrew that have to fly and get the hours they need. We are going as fast as we can go.

Any additional aircraft at this point would relieve or provide a shock absorber during the transition, as we go from transition to deployment and follow-on detachments until we are completely divested of our C-2.

Mr. COURTNEY. Great. Well, thank you. I mean, that's a very helpful picture you painted in terms of the program. And again, I just encourage you guys to just keep, you know, us abreast.

You know, one question is, obviously, there was an accident and there was a loss of life. And I realize this hearing is not about individual—because it—maybe just talk about the status of the case investigation.

Admiral CONN. Yes, sir. Well, the investigation is still ongoing. Our recovery and salvage efforts, we have the 22,000 feet of Kevlar cable to recover the aircraft that is at 18,000 feet of water in the Philippine Sea.

We have to do some follow-on testing with the winch on the salvage vessel, to be able to reel up this aircraft. And then, now that we are in typhoon season in that part of the world, we are going to have to wait for the seas to abate.

Our best estimate right now is, when we look at the conditions that the ocean will provide, we are looking late spring, early summer of next year.

Mr. COURTNEY. Great. Well, thank you for your testimony and your great efforts, and also to the other witnesses for being here. I yield back.

Mr. WITTMAN. Thank you, Mr. Courtney.

We will now go to Mr. Gallagher.

Mr. GALLAGHER. Thank you, Mr. Chairman.

To follow up on that line of questioning that the ranking member was pursuing, you talk about the differences between the C-2 and the CMV-22, which you are testing right now. My understanding is that one of the biggest differences is the lack of a pressurized cabin on the CMV-22.

Can you talk to me about what impact that might have physiologically on passengers and aircraft, and what we should know about those implications?

Admiral CONN. Yes, sir. The V-22 program has in excess of 425,000 hours in all unpressurized cockpits. And we haven't seen any concern at all about having people inside that unpressurized cockpit.

For the CMV-22, it will fly 10,000 feet and below. We—and that was part of the requirements, that it has to be 10,000 feet and below with a full load of equipment, and meet the range specifications to that. And the aircraft will be able to do that.

Additionally, for the—it also has some opportunity because it is tiltrotor, not only to go on carriers but when any deck is certified for that aircraft—Afloat Forward Staging Base or whatnot in the

future, that gives us flexibility to distribute parts in a distributed maritime operations environment.

Did I answer your question, sir?

Mr. GALLAGHER. Yes, sir.

General Kirkland, we have heard a lot, you know, when we travel around to various shipyards, bases, whatnot—anyone that involves hiring of Federal civilian employees, just how difficult that process can be. And even with aggressive energy and management, it can take as long as 140 days to hire a new worker.

So as you look at, sort of, additional C-130 workload, talk to me a little bit about whether you feel like you have the skilled labor on hand and the challenges contained in the Federal civilian hiring process.

General KIRKLAND. Congressman Gallagher, thank you for that question.

I would first like to thank the committee and the larger—this Committee on Armed Services, for the direct hiring authority which we have been provided, which was approved in 2016. And we have used, through the NDAA, temporary authority which I believe is through 2025. Thank you for that.

It has allowed us to hire over 1,500 employees, averaging at 78 days. And that is a combination of the direct hiring authority, but also process improvements with our personnel center to skinny-down that process. Using direct hiring authority, we have accounted for about 75 percent of our external hires at the air logistics complex for our depots.

We are working to expand the direct hiring authority to those organizations which directly support our depots, and specific to the C-130 workload. Through the combination of those efforts, we are 100 percent manned for all of our fiscal year 2019 C-130 work at Warner Robins.

Now the challenge remains, because as we grow our workload there, particularly as we transition the naval aircraft currently going to Utah down to Georgia, we will continue to hire year after year. But the DHA, the direct hiring authority, is a key element of the “1200 in 12” [hire 1,200 technicians in 12 months] initiative going on at Warner Robins right now, which began this past summer.

I would add to that one other thing, that while we work closely with vocational and technical schools around the locations where our depots are, the Air Force Sustainment Center would also benefit from creating an on-ramp for our recently retired military personnel. These skilled journeymen bring years of experience and a vital buffer as we experience other people in the workforce.

And we are looking—asking through our service to make an exception to the 180-day waiting period in support of Federal wait system in some of the lower-level general schedule employees, particularly with the logistics and supply chain management. We need to retain this experience for our service members as they walk out the door.

Mr. GALLAGHER. I appreciate that. I mean, I tend to think that the health of the civilian industrial base is one of the most important issues that we face. It could be a limiting factor if, God forbid,

we had to scale up in response to a great power conflict and it is something that's easy to overlook.

It is certainly something I hear, too, beyond the military industrial base from every company in Northeast Wisconsin. It is just the challenge of finding people, keeping people, retaining talent. And so I think it is something we are going to need to continue to think about here on the committee.

And with that, I yield the remainder of my time, Mr. Chairman.

Mr. WITTMAN. Thank you, Mr. Gallagher.

We will now go to Ms. Bordallo. Thank you. Thank you.

Ms. BORDALLO. Thank you very much, Mr. Chairman and ranking member, and thank you to our witnesses, General Harris, General Kirkland, and Admiral Conn.

Well, I certainly have traveled on C-130s multiple times. I consider them to be the military horses of their aircraft. But gentlemen, the fiscal year 2019 NDAA outlined a framework proposed by Ranking Member Smith for a national commission on military aviation safety.

So I want to ask you, General Harris or Admiral Conn, can you please offer your thoughts on how this commission will benefit mobility mishaps and impact intra-theater airlift challenges?

General HARRIS. Yes, ma'am, if you don't mind, I will start.

Ms. BORDALLO. Surely.

General HARRIS. Our approach to any option to look at safety, that's our number one guidance for the business that we do in the defense of our Nation, so an opportunity to look into that and have those discussions are certainly something that we look forward to and are working with.

That element will be part of a larger study that's being released by Transportation Command on the study of our overall airlifts, not just TAC [tactical] lift, but also our strategic lift.

We will continue to work with that and make sure that we get the information that we need, and the safety is our number one issue. That's where we will focus resources if we determine that that's where we have to go.

Ms. BORDALLO. Very good. You consider it, then, a benefit?

General HARRIS. Yes, ma'am.

Ms. BORDALLO. Admiral Conn.

Admiral CONN. Anything that addresses or looks into the safety of our people, our equipment, or civilians that fly on them, I think it is definitely value-added.

Ms. BORDALLO. Very good. My second question is, Lieutenant General Harris, Secretary Wilson outlined her plan for a 386-squadron Air Force to us on Wednesday morning, just this last Wednesday.

The Air Force leadership calls for reducing the number of tactical airlift squadrons by 2, but increasing special ops, fixed-wing electronic warfare, and fixed-wing rescue units by 17. Now, if the pilot crisis is depleting our experienced aviators, how does the Air Force intend to man these new units with senior aviators and mitigate risk across the C-130 force?

General HARRIS. So ma'am, you bring up a great question.

The first thing we want to do is retain the fantastic airmen that we have now. If we have an aircrew with 10 or 15 years of experi-

ence, training more will take us 10 to 15 years to get that experience back. So we recognize the most important feature that you are asking about is how do we take care of the fantastic airmen and the aviators that we have across all the services? So that's our start that we are working with.

But we also have to get after the foundation, so we are improving our capacity to generate new pilots and new aircrew members, and then our ability to absorb those.

So with our requirement to grow, based on the National Defense Strategy [NDS], which is where Secretary Wilson is pulling her information from, we have to be able to resize to fit the Air Force that we need to win our Nation's wars. So we are starting at the beginning to retain those that we already have, and then growing our capacity to build new ones and bring them on.

Ms. BORDALLO. Very good. My third question, the "Air Force we need" outlined by the Secretary and the Chief also ties the service's way forward to the National Defense Strategy and long-term strategic competition with China and Russia.

General Harris and Admiral Conn, can you speak to how intra-theater airlift requirements will change in this environment, in regards to tactical and strategic airlift?

General HARRIS. Yes, ma'am. Intra-theater airlift will continue to be a workhorse, as you described, and the C-130 will provide that for the long term.

And the focus of that "Air Force we need" study recognizes that we actually have more risk in our strategic lift, so you see some growth in our ability to—to get after what we are required to do to meet, as the NDS says, our bigger threats of China, then Russia. And that's a different focus than we have had in the last several years. So you are going to see a requirement to grow across many of our capabilities in the Air Force.

Ms. BORDALLO. Oh, that's good news. Admiral Conn.

Admiral CONN. I think if you look at the size of the Pacific, and you think of sustaining combat operations, the importance of logistics cannot be overstated, whether it be our MSC [Military Sealift Command] fleet that provides surface lift, whether—or our NUFEA aircraft, or C-40As, and our C-130Ts right now. They are going to play an integral part of making sure the warfighters have what they need to wage combat operations in that environment.

Ms. BORDALLO. Well, that's good news.

And Mr. Chairman, I yield back.

Mr. WITTMAN. Thank you, Ms. Bordallo.

Before we go to Ms. Hartzler, I want to take this opportunity, since this is the last of our subcommittee hearings for this subcommittee, to thank Ms. Bordallo for her service and the tremendous efforts that she has put forward on behalf of all of our men and women in uniform.

She has been, I think, the leading proponent anywhere she goes. If anybody comes across her and doesn't know where Guam is, or what goes on on Guam, then it is—you are not listening, because she is absolutely the number one fan of the people of Guam, and I know that they appreciate your service to the Nation.

You have done a spectacular job. We have had the opportunity to travel around the world together on CODELs [congressional del-

egations], and you have just been spectacular. So thank you so much. What a real testament to public service, and our Nation is better because of your service, and we thank you.

Ms. BORDALLO. Thank you very much, Mr. Wittman, and I have enjoyed working with you.

Mr. WITTMAN. Yeah, it is been a—been an honor and a pleasure.

So with that, we will to Ms. Hartzler.

Mrs. HARTZLER. Mr. Chairman, I would concur on those remarks, and we are going to—we are going to miss you.

So gentlemen, thank you for being here on this very important topic.

According to the DOD [Department of Defense] National Guard and Reserve Equipment Report for Fiscal Year 2018, the average age of the C-130H fleet is 27 years old. The aircraft assigned to the Puerto Rico Air National Guard were among some of the oldest in the fleet. The mishap aircraft was delivered in 1965.

So can you explain how the decision is made to assign aircraft to Air National Guard units?

General HARRIS. Yes, ma'am. I will take that.

We actually have our Strategic Basing Process that works through how—where and how we assign the aircraft that are changing. Based on the guidance that we have been given, we have put new J model C-130s into both the Active, Guard, and Reserves, so we have elements that are in each one of those fleets.

And once we had that, then we looked at replacing the oldest aircraft first, and many of those were in the Active Duty. So that's why most of the E models have been retired—actually, all the E models have been retired at this point, and we are getting after the last aging ones.

So Puerto Rico is some of the oldest aircraft that are still flying. They are down to just a few airplanes. And we are continuing to work through the Strategic Basing Process to determine what is the best mission suitable for the fantastic airmen that we have there.

Mrs. HARTZLER. What is the age of the oldest aircraft? So are there still other ones in Puerto Rico that are 1965 models?

General HARRIS. There are some 1965, ma'am, spread across the fleet. Most of those are simple Hs, because we have an H, an H1, 2, 3—different variants of those. We show that C-130Hs are resident both in Puerto Rico and we also have some in Great Falls and a couple other locations.

Mrs. HARTZLER. So there is a plan, then, to recapitalize the legacy C-130 aircraft?

General HARRIS. To recapitalize? No, ma'am. We are doing our best to modernize; and, at this time, we are not asking for additional recapitalization efforts.

We do see support here from Congress for more. And as we get new C-130Js, we do put those into the oldest fleet. And that's how we will work the Strategic Basing Process.

Mrs. HARTZLER. Okay, very good.

After the mishap, there was a strategic review that was done. That came out with some—a list of risk and recommended mitigations, corrective actions to be completed not later than June 15th of this year.

And I apologize, I was a little late. Maybe you have already covered that. But can you give me an update on, kind of, that report? I haven't had a chance to read it. What were some of the recommendations that were part of that? And where are you at in implementing those that were supposed be done by June?

General HARRIS. With regard to a specific accident, ma'am, we—the investigation's still ongoing. And we have not implemented the—anything that would have come from there yet.

For the strategic report that you are speaking of, if it was a June implementation, I will have to get back with you for that.

Mrs. HARTZLER. Okay. Thank you very much. Appreciate. Yield back.

Mr. WITTMAN. Thank you, Ms. Hartzler.

We will now go to Mrs. Davis.

Mrs. DAVIS. Thank you, Mr. Chairman. And I, of course, acknowledge my colleague and all the teachable moments that you—that you created for us. I think we learned a great deal from you, and I appreciate it.

I wanted to just go back to sort of a basic question. Because I know that, Rear Admiral Conn, you raised in your statement the fact that Congress—you would like to see Congress prioritizing preparedness. And also, you were concerned about the resilience, I think, as well, of our force posture and, certainly, accelerating technological advancements. What—could you be somewhat specific about it?

And—to others as well, what would you really like to see in Congress' desire, of course, and our opportunity to really help in this situation?

Admiral CONN. Well, certainly, Congress helped. We have guidance from the National Defense Strategy that gives us priorities. We have guidance from the CNO [Chief of Naval Operations] in terms of the things we need to prioritize. He calls it “the Navy the Nation needs,” which is the maritime expression of that single strategy in the National Defense Strategy.

Readiness recovery across all our aircraft is a priority at the mission-capable rates that we have right now. It affects retention. It affects combat capability. It affects our ability to—lethality, of what we need to do. For the NUFEA aircraft it affects our ability to do the things we need to do, based on the various priority missions, and if our aircraft aren't up, we aren't able to execute those missions or train the people to execute those missions.

So from a PB19 level and what is in that budget, we can do—we are doing a lot. We will always have more requirements than resources. It would always come down to prioritization. I just don't want to go back to where we have to make false choices of readiness or modernization or recapitalization. We have been there before and we shouldn't go back.

Mrs. DAVIS. General Kirkland, did you want to respond as well?

General KIRKLAND. Ma'am, actually, in that topic, I will defer to General Harris on the program ex [execution].

General HARRIS. Ma'am, very similar to the Navy response. Resiliency is extremely important, and as long as we pay our airmen a fair wage and then give them a value-added mission where they feel like they are working and attaining the freedom that this coun-

try fights for, we find that the airmen are empowered and want to do what it is that they do so well.

Our job to take care of those airmen is to make sure they have the resources they need to get that job done in the most efficient, effective, and safe manner, and we do start with safety, then compliance.

So, much like our Navy colleagues, we do have to make some tough choices. We do our best to prioritize those, and it is an older fleet for the C-130s but our KC-135 and our B-52 fleets are even older. So we are doing what we can to modernize and make those airplanes sustain and get the mission done that we need based on the priorities that we have.

Mrs. DAVIS. Yes. So I think I am hearing you also say not to ignore the personnel issues in making sure that we are attracting and bringing into the force as well as maintaining the force that we have. And sometimes I think that we have a tendency to think that, well, that's where we can save money. And it sounds like that's not been your experience. Thank you. I appreciate that.

I know my colleague brought up the need for—and you have responded about the skilled journeymen that we need. I am also wondering about STEM [science, technology, engineering, and math] fields, as well. I mean, there's been a tremendous amount of focus on this, and yet, when it comes to the number of individuals that are needed in just a host of different areas, you know, we graduated about 500,000 STEM students. China produced about 1.3 million.

What—how is your job really made harder by the fact that we have not invested, actually, in human capital as well as we could?

General HARRIS. Well to this point, the service has been able to hire the talent that we have needed, which is very helpful for us, so we see that coming out of the American public.

We do what we can to invest in STEM, and our Secretary, Secretary Wilson, has been very good about that coming from her background, so she has been most helpful and encouraging us to work with the universities and academia to make sure that we have people understanding that it is a great career field to come into any of our services and defend our country.

General KIRKLAND. If I might add, from the sustainment perspective on the Air Logistics Complex Air Force side, engineers in that technical workforce are absolutely part of—that we have to have. It is a national defense issue.

Our growth industries and software, both in the development and the sustainment of the software, sometimes for 50, 60 years of a weapon system, we need to recruit and retain electrical engineers and other engineers to keep that business going and provide a cost-effective solution for our readiness.

Mrs. DAVIS. Do you see us doing that across the board as well as we could? I mean, making sure that—what role should we all be playing, really, I think, in terms of reaching out to students, whether it is in middle school, high school, to really help them to see—you know, we always say you can't be what you can't see.

We have—in some communities, we have the opportunity for young people to know something about what is going on with the military, and certainly with the—with the Air Force, Navy, et

cetera. But there are many communities in which that is not true. How do we make sure that we are reaching them as well?

Admiral CONN. I think all the services are in a competition for talent with industry, with academia, and within the services itself. I think we have to look at how we train differently for our people. How do we set them up for success?

That is part of the Ready, Relevant Learning. It is not just about the individual's academic background, but what is the environment in which we are training them in that gives them the relevant information to be able to do the tasks they need to do when they need to do them?

But we can't understate the challenge we have, and this is a little outside my lane, but of recruiting the talent we need as we are growing the force. And I think the recent—there has been changes to bonuses that have been helpful. I can't speak to the trends yet, but initially they look good. But it is also getting those talented sailors who maintain those aircraft, who work on those ships. It is going to be a challenge, in my view.

Mrs. DAVIS. I would wonder if perhaps, in your thinking about this, it sounds like you have given it some thought, whether there are ways that we could be organized differently to do that better, and to make sure that as you suggest, the environment and the incentives could possibly be different?

General HARRIS. So ma'am, if I may respond to that, Secretary Wilson has recently nearly doubled our College Intern Program, which is bringing much more young talent to us. But she is also having us change the capacity of our recruiting squadrons, both in where they are at, and where they go to get to the talent that's available for us.

And then finally, a lot of the people are getting experience. As we said, software is one of our growing concerns. Instead of bringing everybody in as a young airman or a young officer, it is hiring people to the right skill level that they are already at, and we are working with Congress to get that authority, and it has been very helpful.

Mrs. DAVIS. Okay, we will continue to work on that. Thank you. Thank you all.

Mr. WITTMAN. Thank you, Mrs. Davis.

If there are no other questions from the committee members, I want to thank our witnesses. Lieutenant General Harris, thank you. Lieutenant General Kirkland, thank you. Rear Admiral Conn, thank you. Thanks for your perspectives.

As you have pointed out, we have some challenges ahead, but we want to make sure that we are on track with the upgrades with existing aircraft and modernization with aircraft replacement, and making sure that we stay on track. So we appreciate your efforts, and we look forward to continued progress in those realms.

And if there's nothing else to come before the subcommittee, we stand adjourned.

[Whereupon, at 9:51 a.m., the subcommittee was adjourned.]



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**A P P E N D I X**

SEPTEMBER 28, 2018

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**PREPARED STATEMENTS SUBMITTED FOR THE RECORD**

SEPTEMBER 28, 2018

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**Opening Remarks of the Honorable Robert J. Wittman,  
Chairman of the Seapower and Projection Forces Subcommittee,  
for the hearing on  
Contributing Factors to C-130 Mishaps and Other Intra-Theater Airlift  
Challenges  
September 28, 2018**

Today the subcommittee convenes to receive testimony on Contributing Factors to C-130 Mishaps and Other Intra-Theater Airlift Challenges.

The distinguished panel of Air Force and Navy leaders testifying before us are:

- Lieutenant General Jerry D. Harris, Deputy Chief of Staff for Strategic Plans & Programs Department of the Air Force
- Lieutenant General Donald Kirkland, Commander, Air Force Sustainment Center Department of the Air Force; and
- Rear Admiral Scott D. Conn Director, Air Warfare, Office of the Chief of Naval Operations Department of the Navy

Gentlemen, thank you for being with us today.

Recently there has been an alarming rise in non-combat aviation accidents. From fiscal years 2013 to 2017, manned fighter, bomber, helicopter, and cargo warplane accidents rose nearly 40 percent – resulting in the loss of over 130 service members in aviation mishaps. Of these incidents, over 20 percent of fatalities occurred in 3 accidents involving legacy intra-theater airlift C-130H Hercules, KC-130T, and C-2A Greyhound aircraft operated by the Puerto Rico Air National Guard (PRANG), USMC Reserve, and Navy active duty respectfully.

Considering these three mishaps involved legacy intra-theater aircraft, it is my fervent belief that the Services must do everything possible to ensure the safety of flight. To this end, among the things this committee must consider is the recapitalization and modernization of the oldest and most vulnerable legacy aircraft.

A review of the Air Force's intra-theater airlift portfolio shows that the Service is on track to recapitalize its Regular component units with C-130J aircraft. Air Force is also recommending that the Reserve and Air National Guard retain significant capacity in legacy C-130H aircraft. To extend the life and relevance of the legacy Guard and Reserve fleet, the Air Force is recommending funding for major modernization programs, such as center wing box replacement, to lengthen service life in addition to pursuing aviation modernization program upgrades to keep these aging aircraft relevant. This committee has been active in supporting propulsion system upgrades for legacy C-130 aircraft in the Reserve Component by authorizing additional funds for this important effort. To date, the Air Force has not requested this funding in its base budget.

A review of Marine intra-theater airlift shows that the Service is on track to fully recapitalize its aging KC-130T fleet with 79 new KC-130J aircraft, to include its Reserve squadrons, by 2023.

And finally, the Navy plans to begin capitalizing its legacy KC-130T fleet of 25 aircraft by procuring its first 3 aircraft in 2023. With that said, questions remain as to the level of effort being placed in the pursuit of this program by the Navy and Air Force resource sponsors as they seek to balance the needs of competing service priorities. Additionally, there is concern over how the Services responded to the crash of the KC-130T and PRANG C-130H with Navy and Marines grounding their fleets and Air Force choosing to continue flying. And more specifically, this committee is interested in learning how and why the Legacy C-130 propeller systems are serviced differently between the Marine Corps and Air National Guard aircraft at the depots.

George Patton once said, “the more you sweat in peace, the less you bleed in war.” Our most urgent responsibility is to ensure enough sweat is being shed to reduce this bleeding.

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U.S. HOUSE OF REPRESENTATIVES

DEPARTMENT OF THE AIR FORCE

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

SUBJECT: LEGACY C-130 MODERNIZATION AND RECAPITALIZATION

STATEMENT OF: Lt Gen Jerry D. Harris, Jr. USAF Deputy Chief of Staff  
(Strategic Plans and Requirements)

September 28, 2018

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U.S. HOUSE OF REPRESENTATIVES

**Introduction**

Chairman Wittman, Ranking Member Courtney, distinguished members of the subcommittee, thank you for the opportunity to provide you with an update on the legacy C-130 fleet modernization and recapitalization. We appreciate your continued support of our intra-theater airlift fleet, and look forward to continuing to work with you.

The new National Defense Strategy (NDS) is clear: Inter-state strategic competition, not terrorism, is now the primary concern in U.S. national security; as such, the Air Force is committed to regaining readiness soonest. We are examining a myriad of initiatives to mitigate the toll 27 years of global operations has taken on our Airmen, equipment, and infrastructure. Meanwhile, our adversaries leveraged this opportunity to advance their own capabilities and close the technological gap. We must modernize the core Air Force missions, to include Rapid Global Mobility, in order to maintain our asymmetric military advantage.

Rapid Global Mobility sustains the Joint Force military advantages both globally and in key regions, not only enabling our forces to hold any target around the world at risk at any time, but also supplying the largest military logistic network in history. In 2017, Airmen transported nearly 1 million personnel and delivered over 738 million pounds of warfighting equipment and humanitarian supplies. At home, Airmen delivered 13,600 short tons of relief supplies following a string of record-setting hurricanes and helped combat multiple wild fires in the western United States. 2018 is on pace to meet or exceed Rapid Global Mobility's 2017 efforts.

In light of the new NDS, the Air Force is committed to build a more lethal and ready force, strengthen alliances and partnerships, and cost-effectively modernize to *compete, deter,*

and *win* in any environment. Modernization is a multi-year effort, and the Air Force needs your continued support in the form of stable, predictable and timely funding levels to prevent our adversaries from closing the technology gap. With this help, we can fulfill our mandate of providing the most effective Air Force possible for the nation.

### **C-130s**

The combat delivery C-130 fleet is diverse and consists of legacy C-130H and newer C-130J aircraft, both of which are medium-size transport aircraft capable of delivering air logistic support for all theater forces, including those involved in combat operations. Additionally, we have a fleet of special mission C-130 aircraft (AC/LC/EC/MC/HC/WC-130s) that complete a variety of tactical operations across a broad range of mission environments.

The Air Force is modernizing the combat delivery C-130 fleet through a prioritized approach emphasizing aircraft safety, compliance, modernization, and limited recapitalization. First, we are ensuring the C-130 is safe to operate by keeping the aircraft structurally sound through programs such as center wing box replacement; for the past decade, the Air Force has invested in the replacement of aging center wing boxes on the C-130 fleet--degradation has been exacerbated by nearly 17 years of continuous deployment to the harsh Central Asian theater of operations. The Air Force will continue to advocate funding for this critical safety effort, for both the C-130H and C-130J fleets, as it replaces center wing boxes with service life that expires before aircraft retirement. Second, both the C-130H and C-130J fleets require avionics and communication upgrades to comply with the Federal Aviation Administration (FAA) and foreign government mandated airspace management improvements. The FAA's deadline for compliance is January 1, 2020; the C-130H fleet will meet the deadline via the C-130H Avionics Modernization Program (AMP) Increment 1, and the C-130J will be compliant via the

accelerated Automatic Dependent Surveillance Broadcast (ADS-B) out program. Third, both the legacy C-130H and the C-130J fleets require avionics, communications and electrical upgrades to maintain their warfighting capability and improve maintainability and reliability; these upgrades are in addition to the aforementioned compliance driven upgrades. The C-130J Block 8.1 upgrade will equip the C-130J fleet with a common configuration and will ensure worldwide airspace and terminal access; while the Avionics Modernization Program (AMP) Increment 2 upgrade for the C-130H fleet will mitigate pending obsolescence and diminishing manufacturing source issues by replacing aging, non-sustainable equipment with a new digital avionics suite. AMP Increment 2 also introduces capabilities that will lower the cost of ownership and extend the viability of the USAF C-130H fleet by increasing reliability, maintainability, and sustainability.

The FY19 PB requests \$106.0 million in research, development, test and evaluation (RDT&E) and \$22.7 million in procurement funds to support the legacy C-130H fleet. As reported in our April 2017 Report to Congress, given limited Air Force funding and a focus on areas of greater risk, at this time there is no plan to purchase additional combat delivery C-130Js beyond the current program. Therefore, instead of recapitalization, the Air Force currently intends to modernize the remaining combat delivery C-130Hs in our total force inventory via C-130H AMP Increments 1 and 2. Additionally, the Air Force is currently evaluating the various C-130H propulsion upgrade programs. In contrast to combat delivery C-130H partial recapitalization, the Air Force intends to fully recapitalize the Air Force Special Operations Command's and Air Combat Command's special mission legacy C-130 aircraft with C-130Js (AC/MC/HC-130Js).

Regarding limited recapitalization with C-130J, the C-130J aircraft provides extra cargo

carrying capability, longer range, and better fuel efficiency for our combat delivery mission when compared to legacy C-130s. Special mission variants of the C-130J conduct airborne psychological operations and offensive electronic warfare (EC-130J), weather reconnaissance (WC-130J), search and rescue (HC-130J), and special operations (MC-130J and AC-130J). The FY14 National Defense Authorization Act authorized multi-year procurement for the C-130J; as part of the FY14 PB multi-year contract, the Air Force is procuring 83 C-130Js (all variants) through FY18.

The FY19 PB requests \$15 million for C-130J RDT&E and \$177 million for C-130J modification efforts. The FY19 PB also requests a new multi-year procurement contract which starts with our request of \$33 million for HC/MC-130J RDT&E and \$1,217 million for HC/MC-130J procurement efforts in FY19. This new FY19 multi-year contract procures a total of 25 Air Force aircraft from FY19 to FY23 (23 AC/MC-130J and 2 HC-130J along with 28 Navy, Marine Corps and Coast Guard Aircraft). The FY19 multi-year procurement contract, together with our FY19 Overseas Contingency Operations (OCO) request for 1 HC-130J completes recapitalization of the Air Force Special Operations Command's 94 AC/MC-130J fleet and Air Combat Command's 39 HC-130J fleet by FY23.

As previously mentioned, when the Air Force considers modifications and modernization for a legacy fleet, the Air Force invests via a prioritized approach emphasizing aircraft safety, compliance, and modernization. Aircraft safety and airworthiness is always an investment priority and is not subjected to risk analysis when it comes to resourcing. With limited total obligation authority, the Air Force will, at times, delay compliance-related or modernization modifications, but not safety modifications. For the legacy C-130H fleet, we have fully funded safety-related modifications such as the Center Wing Box replacement effort and we have

funded aircraft modernization through AMP Increment 1 and AMP Increment 2. Finally, the Air Force is testing the various engine modification programs and is currently conducting an Operational Utility Evaluation (OUE) on the combined engine modifications with an estimated completion date of March 2019. The OUE will provide a fielding recommendation based upon the operational effectiveness and suitability of the propulsion system upgrades. Due to limited budgets, the Air Force will need to balance investment costs and timelines of payback with other Air Force priorities for a final decision on the engine modification programs.

As we embark on this strategy, we understand the recommendations of the 2014 National Commission on the Structure of the Air Force. We considered those recommendations when developing our April 2017 report to Congress which was directed via the national Defense Authorization Act for Fiscal Year 2017 and the Department of Defense Appropriations Bill for 2016. As previously mentioned, the April 2017 report points out that given limited Air Force funding and a focus on areas of greater risk; at this time there is no plan to purchase additional combat delivery C-130Js beyond the current program. The Air Force seeks to balance requirements with affordability and continually weigh the relative improvement in capability the C-130J would provide over the legacy C-130H against other Air Force programs with greater risk. It is worth mentioning that the C-130H was first deployed in June of 1974 which makes it younger than many aircraft fleets in our Air Force inventory (C-5, KC-135, B-52, etc.)

Finally, in reference to the Air Force's process for assigning aircraft to particular units, during the Air Force's Planning and Programming Processes, aircraft assignment decisions are made via the Air Force Corporate Structure. For execution-year aircraft assignment, decisions are made via the Program Change Request in the Air Force's Corporate Structure Process. As part of this process, the WC-130Hs in the Puerto Rico Air National Guard are in the process of

being retired while the Air Force considers alternate missions for the Puerto Rico Air National Guard.

**Conclusion**

The USAF remains committed to providing the most reliable, safe and effective intra-theater airlift fleet possible to the nation. In the midst of the challenges ahead, we aim to continue these programs and deliver these systems - not only as a vital capability to our forces - but also as a best value to our taxpayer. When the Air Force considers risk in resource trades, we are only discussing risk in capability and capacity to meet war plan requirements. We do not consider trades when it comes to safety of flight. In light of these constraints, the President's Budget for Fiscal year 2019 is consistent with the results and recommendations of the C-130H Recapitalization and Modernization report delivered to Congress in April of 2017.

**Lieutenant General Jerry D. Harris Jr.**  
**Deputy Chief of Staff Strategic Plans & Programs**

Lt. Gen. Jerry Harris is Deputy Chief of Staff for Strategic Plans and Requirements, Headquarters U.S. Air Force, Washington, D.C. In support of the Chief of Staff and Secretary of the Air Force, General Harris leads the development and integration of the Air Force strategy, long-range plans and operational capabilities-based requirements. He directs and coordinates activities ensuring the Air Force builds and employs effective air, space and cyber forces to achieve national defense objectives.

General Harris entered the Air Force in 1985 as a graduate of the ROTC program at Washington State University. He has served as a flight commander, operations officer, weapons officer and inspector general. The general served on the staffs of two numbered Air Forces and one major command, all in operations. He has also served as the Combined Air and Space Operations Center Battle Director for operations Iraqi Freedom and Enduring Freedom. General Harris has commanded at squadron, group and wing levels. Prior to his current assignment, General Harris was the Vice Commander, Air Combat Command, Langley Air Force Base, Virginia, responsible for organizing, training, equipping and maintaining combat-ready forces for rapid deployment and employment while ensuring strategic air defense forces are ready to meet the challenges of peace time air sovereignty and wartime defense.

General Harris is a command pilot with more than 3,100 flying hours in the F-16.

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SUBCOMMITTEE ON SEAPOWER AND PROJECTION FORCES  
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DEPARTMENT OF THE AIR FORCE

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

SEPTEMBER 28, 2018

SUBJECT: Contributing Factors to C-130 Mishaps and Other Intra-Theater Airlift Challenges

STATEMENT OF: Lieutenant General Donald E. (Gene) Kirkland  
Commander  
Air Force Sustainment Center

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**Introduction**

Chairman Wittman, Ranking Member Courtney, distinguished Members of the Subcommittee, thank you for the opportunity to provide you with an update on legacy C-130 sustainment and readiness. On behalf of our Secretary, the Honorable Heather Wilson, and our Chief of Staff, General David Goldfein, thank you for your continued support and demonstrated commitment to our Airmen, Air Force Civilians, Families, and Veterans.

Since its creation as part of Air Force Materiel Command's reorganization in 2012, the Air Force Sustainment Center (AFSC) executes lethal air power through logistics processes, part of which sustains legacy aircraft like the C-130; manages the global supply chain; and sets the theater as the engine of readiness. We directly support every combatant commander, service, and interagency partner, as well as 63 allied countries with depot-level maintenance, supply chain management, and power projection for legacy and 5th generation weapons systems. By achieving the right results the right way through our disciplined "Art of the Possible" leadership and constraints-based management methodology, we continue to yield significant results.

Our nearly 40,000 Total Force Airmen who are laser focused on providing cost-effective sustainment and logistics capabilities within available resources. We are finding ways to sustain legacy weapons systems using 21st century processes. Our Air Logistics Complexes provide depot-level maintenance, engineering support, and software development to multiple weapon systems, including 19 variants of the C-130 aircraft. Our depot-level maintenance is executing our Service's program office modernization schedule and depot-level maintenance actions

designed to ensure the safe operation of the C-130 fleet; namely, aircraft maintenance, commodity and software production, fabrication and manufacturing facilities and labs to support U.S. Air Force (USAF) and Department of Defense aircraft and equipment, including C-130 aircraft and components for the U.S. Navy (USN) and U.S. Marine Corps (USMC). We also provide maintenance on C-130s outside the DoD; namely, for the Coast Guard (Department of Homeland Security) and the Forest Service (Department of Agriculture). Finally, we install modifications on the aircraft in conjunction with depot-level maintenance work. For example, we upgrade the avionics suite as well as provide electronic countermeasure upgrades. We also extend the service life of the USAF's C-130Hs and C-130Js by replacing center wing boxes as they approach life limits.

The AFSC—with its organic industrial base—is a readiness and war sustaining insurance policy. But we continue to experience significant readiness challenges due to aging infrastructure, increasing costs and complexities of weapon system sustainment, and a federal work force hiring process that is not totally in line with today's environment. It is a national imperative to continue to have an organic industrial base supporting aircraft such as C-130.

#### **Transition of C-130 Workload**

In March 2017, the AFSC made the strategic decision to transfer all C-130 workload currently at Ogden Air Logistics Complex (OO-ALC) at Hill AFB, UT to the Warner-Robins Air Logistics Complex (WR-ALC) at Robins AFB, GA, with the transition completed by FY22. Because all three Complexes (including Oklahoma City Air Logistics Complex at Tinker AFB,

OK) operate as an enterprise, the USAF is able to achieve greater economies of scale.

WR-ALC is the single complete overhaul facility for all 54H60 four-bladed propellers for the USAF, USN, and USMC. These propellers are used on USAF C-130H aircraft, including derivative aircraft (AC-130U, AC-130W, EC-130H, HC-130N, HC-130P, LC-130H, MC-130H, MC-130P, and WC-130H), and USN/USMC C-130T and KC-130T aircraft. A slightly different version of the 54H60 propeller is also used on USN P-3 aircraft. This P-3 version of the propeller is also overhauled at WR-ALC.

Based on the recommendation of an Independent Review Team (IRT), the USAF and USN Program Offices are updating propeller overhaul requirements, and once finalized, the propeller OEM is expected to adopt these same requirements for their commercial manual. The updated requirements bring together the best practices from each manual as well as adding new inspection procedures developed by and under the direction of the IRT.

Overhaul procedure updates are complete for all of the propeller components except the propeller blade. Using these updated procedures, WR-ALC resumed build-up and delivery of 54H60 propellers on 12 March 2018. These propellers are assembled with newly manufactured propeller blades procured from the OEM. The OEM is currently delivering at maximum capacity of approximately 30 blades per month. Efforts are underway by the OEM to increase production capacity to approximately 48 blades per month by October 2018. While propeller blade overhaul requirements continue to be updated and refined, it is expected that WR-ALC will not reach full capacity for propeller blade overhaul until early 2019.

We continue to proactively identify and mitigate safety issues within the C-130 fleet. These efforts include Program Office participation in mishap safety investigations, implementing recommendations from previous safety investigations, analysis of discrepancy reports, and reviews of findings from the field and depots. As a result of these efforts, C-130 Engineering continually identifies safety issues and develops mitigations to address these issues. As an example, C-130 Engineering issued eight (8) safety-related inspections/mitigations over the last 12 months to address issues that were identified. In addition, the Program Office proactively monitors the health, safety, and service life of all USAF C-130 aircraft through various programs such as the Aircraft Structural Integrity Program (ASIP), corrosion prevention and control programs, multiple inspection programs at the unit and depot levels, and more.

#### **Civilian Workforce Hiring Initiatives**

A key component of sustaining and modernizing legacy weapon systems such as the C-130 is a trained and technically proficient depot workforce. The AFSC depends on a 78% civilian workforce; 89% if our contractor teammates are included. Our civilian Airmen serve and sacrifice for our nation as passionately as those who wear our uniforms. As we evolve and adapt our weapons systems and concepts of operation, we must evolve and adapt our workforce. A 5th Generation Air Force requires a 5th Generation workforce. Requirements for a Science-Technology-Engineering-Math (STEM) educated workforce and advanced manufacturing and technical skills are ever increasing. Each weapon system we sustain brings with it an increasing requirement for software development and maintenance to perform almost every function on the aircraft, from manipulating flight controls, interfacing with weapons, navigation and

communication, recording system health and status, etc. Our need for scientists and engineers to sustain these software-intensive weapons systems is increasing dramatically. In addition to developing and sustaining new weapons systems, our engineers must also find ways to sustain our aging legacy systems like the C-130. From understanding airframe stress, metallurgy, non-destructive inspection techniques, and reverse engineering parts, it takes a talented pool of engineers to help us sustain our legacy Air Force. As we continue to sustain our legacy fleet, our civilian engineers are a pivotal component of readiness. As we project a steady increase in the technical workforce needed to support critical warfighting systems, any barriers to recruiting and retaining a skilled workforce are detrimental to our readiness.

While recent authorities like Direct Hiring Authority (DHA) and Expedited Hiring Authority (EHA) have given us new tools for hiring strategies, we operate within an antiquated civilian hiring system that constrains our ability to effectively compete with industry for a qualified workforce. The ability to hire critical skill sets to sustain our USAF is a strategic issue for national defense. Even so, we devote significant resources to recruiting efforts. WR-ALC, where the C-130 programmed depot maintenance is performed, hired 834 new employees in FY18, most of which have been assigned to the C-130 workload. We are now 100 percent manned for that platform for FY19 workloads. The use of the depot DHA and EHA empowered our supervisors to provide on the spot job offers, thereby allowing us to compete with industry to secure top talent. Thank you for your active role in obtaining these critical authorities and your continued support of extending their use. Completion of training for this newly hired workforce is imminent, which will help get the C-130 schedule back in line with projected production and delivery schedules.

Our workforce challenges are not just confined to engineers and scientists. We also rely on a very large labor force of highly skilled technicians and mechanics that work in our depots and supply chain management. We are concerned the U.S. will not have enough highly skilled technicians to support the replenishment and increasing workload demands, and worry the Federal government will not be able to compete for the talent we need to secure a robust workforce. While we work very closely with vocational training centers around our Air Logistics Complexes, they can only supply entry-level skills. The AFSC would benefit from creating an on-ramp for recently retired military personnel. These skilled journeymen provide vital, mature skill sets and years of experience that act as a buffer to develop our entry-level personnel. It is imperative for AFSC to tap into these skills early and often in order to counteract retirements and support the right operational mix of candidates. A holistic approach to proactively solve this problem would be to make an exception for the 180-day waiting period in support of hiring federal wage system personnel and some lower level general schedule employees involved in the logistics and supply chain management categories. As it stands today, the 180-day waiting period puts AFSC at a disadvantage against corporations competing for this experienced workforce.

### **Closing**

We take seriously any aircraft mishap, and perpetually strive to do our absolute best to carry out our mission as safely and effectively as possible and prevent future mishaps. The C-130s are a safe, effective aircraft for its missions, and we have programs in place to ensure these conditions going forward. We take our responsibilities very seriously. Our service

members are our greatest asset and we are absolutely committed to their safety as we continue to deliver combat power to our combatant commanders.

### **Lieutenant General Donald E. "Gene" Kirkland**

Lt. Gen. Donald E. "Gene" Kirkland is the Commander, Air Force Sustainment Center, Air Force Materiel Command, headquartered at Tinker Air Force Base, Oklahoma. As the AFSC Commander, he leads 43,000 Total Force U.S. and U.K. Airmen across three air logistics complexes, three air base wings, and two supply chain wings, operating from a global network of 26 locations.

The AFSC is responsible for \$26 billion in assets generating \$16 billion in annual revenue. The command provides global logistics and sustainment planning, operations, and command and control including agile software development and sustainment, supply chain management and execution, weapons systems maintenance, modification, repair and overhaul, as well as critical sustainment for the Air Force and Navy nuclear enterprise. The AFSC also provides mission essential support to joint and interagency operations, allies, coalition partners, and foreign military sales partners.

General Kirkland entered the Air Force in 1988 through Officer Training School. He is a career aircraft and munitions maintenance officer, and has served on the logistics staffs at U.S. Central Command and the Joint Staff. He also served as Executive Officer to the Chief of Staff of the Air Force and Commander of the Oklahoma City Air Logistics Complex. Prior to his current assignment, he was the Director of Logistics at Headquarters U.S. Air Force.

#### **EDUCATION**

1987 Bachelor of Science in Physics, University of Florida, Gainesville  
 1990 Master of Science in Administration, Central Michigan University, Mount Pleasant  
 1994 Squadron Officer School, distinguished graduate, Maxwell AFB, Ala.  
 1999 Air Command and Staff College, by correspondence  
 2000 College of Naval Command and Staff, distinguished graduate, Newport, R.I.  
 2000 Master of Arts in National Security and Strategic Studies, Naval War College, Newport, R.I.  
 2002 Department of Defense Executive Leadership Development Program  
 2004 Air War College, by correspondence  
 2006 Industrial College of the Armed Forces, Fort Lesley J. McNair, Washington, D.C.  
 2006 Master of Science in National Resource Strategy, National Defense University, Fort Lesley J. McNair, Washington, D.C.  
 2011 National Security Studies Program, The Elliott School of International Affairs, George Washington University, Washington, D.C.  
 2018 Driving Government Performance, Harvard Kennedy School, Harvard University, Cambridge, Mass.

#### **ASSIGNMENTS**

June 1988 - September 1990, various munitions officer positions, 5th Munitions Maintenance Squadron, Minot AFB, N.D.  
 October 1990 - March 1991, Officer in Charge, Munitions Branch, 51st Equipment Maintenance Squadron, Osan AB, South Korea  
 April 1991 - October 1991, Assistant Officer in Charge, 19th Aircraft Maintenance Unit, 51st Aircraft Generation Squadron, Osan AB, South Korea  
 October 1991 - October 1993, Officer in Charge, Munitions Flight, and later, Maintenance Supervisor, 96th Maintenance Squadron, Dyess AFB, Texas  
 October 1993 - May 1994, Chief, Quality Assurance, 7th Logistics Group, Dyess AFB, Texas  
 June 1994 - July 1994, student, Logistics Plans Officer Course, Lackland AFB, Texas  
 August 1994 - May 1997, Deputy Chief, and later, Chief, Logistics Plans Flight, 3rd Logistics Support Squadron, Elmendorf AFB, Alaska  
 June 1997 - July 1999, Joint Munitions Staff Officer (J4), Directorate of Logistics, U.S. Central Command, MacDill AFB, Fla.

August 1999 - June 2000, student, College of Naval Command and Staff, Newport, R.I.  
 June 2000 - May 2002, Commander, 28th Munitions Squadron, Ellsworth AFB, S.D.  
 May 2002 - July 2005, Staff Officer, and later, Chief, Readiness Branch (J4), Directorate of Logistics, the Joint Staff, the Pentagon, Arlington, Va.  
 August 2005 - June 2006, student, Industrial College of the Armed Forces, Fort McNair, Washington, D.C.  
 June 2006 - June 2007, Deputy Commander, 379th Expeditionary Maintenance Group, Al Udeid AB, Qatar  
 July 2007 - October 2007, Chief, Munitions Division (A4), Directorate of Logistics, Headquarters Air Combat Command, Langley AFB, Va.  
 November 2007 - July 2009, Commander, 5th Maintenance Group, Minot AFB, N.D.  
 August 2009 - December 2009, Special Assistant to 9th Air Force Commander, Langley AFB, Va.  
 January 2010 - June 2011, Commander, 633rd Air Base Wing, Joint Base Langley-Eustis, Va.  
 July 2011 - August 2012, Executive Officer to the Chief of Staff, Headquarters U.S. Air Force, the Pentagon, Arlington, Va.  
 September 2012 - March 2015, Commander, Oklahoma City Air Logistics Complex, Tinker AFB, Okla.  
 April 2015 - August 2017, Director of Logistics, Civil Engineering and Force Protection, Headquarters AFMC, Wright- Patterson AFB, Ohio  
 August 2017 - July 2018, Director of Logistics, Deputy Chief of Staff for Logistics, Engineering and Force Protection, Headquarters U.S. Air Force, Arlington, Va.  
 August 2018 - present, Commander, Air Force Sustainment Center, Tinker AFB, Okla.

#### **SUMMARY OF JOINT ASSIGNMENTS**

June 1997 - July 1999, Joint Munitions Staff Officer (J4), Directorate of Logistics, U.S. Central Command, MacDill AFB, Fla., as a captain  
 May 2002 - May 2004, Staff Officer, and later, Chief, Readiness Branch (J4), Directorate of Logistics, the Joint Staff, the Pentagon, Arlington, Va., as a lieutenant colonel

#### **MAJOR AWARDS AND DECORATIONS**

Distinguished Service Medal  
 Legion of Merit with two oak leaf clusters  
 Bronze Star Medal  
 Defense Meritorious Service Medal with oak leaf cluster  
 Meritorious Service Medal with two oak leaf clusters  
 Joint Service Commendation Medal  
 Air Force Commendation Medal with oak leaf cluster

#### **EFFECTIVE DATES OF PROMOTION**

Second Lieutenant Feb. 23, 1988  
 First Lieutenant Feb. 23, 1990  
 Captain Feb. 23, 1992  
 Major July 1, 1999  
 Lieutenant Colonel March 1, 2002  
 Colonel Aug. 1, 2007  
 Brigadier General May 2, 2013  
 Major General March 7, 2017  
 Lieutenant General Aug. 7, 2018

(Current as of September 2018)

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THE HOUSE COMMITTEE  
ON ARMED SERVICES

STATEMENT OF

REAR ADMIRAL SCOTT CONN  
DIRECTOR AIR WARFARE

BEFORE THE

SEAPOWERS AND PROJECTION FORCES SUBCOMMITTEE

OF THE

HOUSE ARMED SERVICES COMMITTEE

ON

MODERNIZATION AND RECAPITALIZATION OF LEGACY C-130s

SEPTEMBER 28, 2018

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ON ARMED SERVICES

**INTRODUCTION**

Mr. Chairman, Ranking Member Courtney and distinguished Members of the Subcommittee, I thank you for the opportunity to appear before you today to discuss the Navy's legacy C-130 Aircraft Modernization and Recapitalization. Our budget request aligns the requirements of these aircraft to the current National Defense Strategy which identifies a more complex global security environment characterized by overt challenges to the current international order and the resurgence of long-term, strategic competition between nations. This request recognizes that we are emerging from a period of strategic atrophy that has resulted in the erosion of some of our competitive military advantage.

Navy aviation remains highly capable today and we are prepared to respond as the nation requires. The Navy provides a maritime strike and expeditionary power projection force that is continuously forward-deployed. We provide the persistent presence and multi-mission capabilities that represent a majority of U.S. influence across the global commons. To support the critical power projection that this force provides, the Navy requires unique and robust logistic support to enable our warfighters. While the joint force providers deliver a large amount of the aerial logistics support between theaters, the Navy is required to provide the intra-theater airlift support that is specific to the distributed nature of Naval Operations. We call this capability Navy Unique Fleet Essential Airlift (NUFEA) and it bridges the logistics gap from the joint force provider at the Aerial Port of Debarkation to the Fleet Logistics Sites or distributed operations sites, supporting not only Naval Aviation or the Carrier Strike Group, but all of Naval Operations from Surface/Subsurface combatant repairs to Expeditionary support. The requirement for this unique naval support has been proven time and again since World War Two.

Operated entirely by the Navy Reserve, the Navy uses two aircraft for the NUFEA mission, the C-40A Clipper, and the C/KC-130T Hercules. Both aircraft serve our needs well; however, only the C/KC-130T can support the missions with large or outsized cargo as well as operations into small, remote, or unfinished airstrips as are encountered from

time to time to support the Fleet. The Navy has established a risk reduced redline requirement of 24 C-130 series aircraft from the identified requirement of 32. These aircraft are distributed across 5 Fleet Logistics Support (VR) Squadrons located in fleet concentration areas around the country: Naval Air Station (NAS) Point Mugu, California; NAS New Orleans, Louisiana; NAS Jacksonville, Florida; Naval Air Facility Washington, D.C.; and Joint Base McGuire-Dix-Lakehurst, New Jersey. The Navy also operates one C-130T with the Naval Flight Demonstration Squadron creating a total program of 25 Navy C-130s.

#### **Navy C/KC-130T Modernization Initiatives**

##### **NP2000 and the Propeller Red Stripe**

The readiness of the Navy's C/KC-130T fleet of aircraft is of critical importance as was demonstrated following the grounding of the fleet in September last year. For that reason, we thank the Committee for their support in funding \$121.0 million for the NP2000 propeller system in PB18 to restore the readiness of the Navy's C/KC-130T fleet and return the aircraft to a flying status faster than planned. As we speak, the first two systems have been installed by the manufacturer in Kiln, Mississippi with the first flight scheduled this month. Already in use by the Air Force Air National Guard, the NP2000 propeller system also addresses a top readiness degrader for the C/KC-130T fleet by replacing the legacy 4 blade system with a modern and more efficient 8 blade high thrust composite blade system. The NP2000 will provide performance improvements to the C/KC-130T fleet and is expected to increase the readiness rates currently seen. We anticipate that all the aircraft will be fully modified by FY20.

##### **Avionics Obsolescence Upgrade (AOU)**

AOU provides the fleet with critical safety and navigation enhancements that brings the C/KC-130T fleet into compliance with the Performance Based Navigation (PBN) mandates from the Federal Aviation Administration (FAA) and International Civil

Aviation Organization (ICAO). The system is required for and meets multiple new worldwide requirements for Communication, Navigation, and Surveillance/Air Traffic Management (CNS/ATM) bringing the C/KC-130T into the future of air navigation. These mandates begin in 2020 and if not met, will prevent the Navy's only medium lift rapid response aircraft from meeting operational missions. AOU also incorporates multiple aircraft safety improvements including an improved aircraft avoidance and awareness system, a terrain awareness system, a digital flight data recorder, and an emergency location transmitter - all proven lifesaving systems that increase safety for aircrew and passengers.

The FY 2019 budget requests \$15.2 million for AOU APN for the developmental test required to reach Initial Operational Capability (IOC). IOC for this program was expected to be achieved in FY 2018; however, Flight Test has been delayed due to the grounding of all Navy and Marine Corps C/KC-130T aircraft resulting in a new projected IOC in 2<sup>nd</sup> Quarter FY 2020.

#### **Carbon Brakes**

The Navy is also modernizing the C/KC-130T brake system with carbon brakes that provide enhanced safety and maintainability over the current steel brake assemblies at a reduced weight resulting in cost savings in maintenance, sustainment, and fuel.

The Carbon Brake modernization was supported in the FY 2018 National Guard and Reserve Equipment Appropriation (NGREA) request submitted by the Chief of Navy Reserve (CNR) for \$8.9 million. Installations will be completed by the end of FY 2020.

#### **Navy C/KC-130T Recapitalization Initiative**

Ultimately, the Navy will need to recapitalize the C/KC-130T fleet to a Naval standard version KC-130J. The Navy KC-130J will form the backbone of the Naval Air Logistics enterprise. With the ability to support large or outsized cargo as well as deliver fuel to forward operating locations, the KC-130J is vital to the Navy's ability to operate

forward and support the Fleet. The KC-130J will also save the Navy money by buying into an existing production line aircraft in a new Multi-Year Program that has already undergone full development with Non-Recurring Engineering (NRE). Further, the refueling capability the aircraft supports will enable the Navy to meet critical capability gaps to support the warfighter with expeditionary fuel support and in-flight refueling, saving the Navy more in the future years.

The FY 2019 budget request includes \$12.0 million in APN for the Economic Order Quantity (EOQ) funding to procure 3 Navy aircraft in FY 2023. This is the beginning of the Navy's recapitalization with a current program of record of 25 KC-130J aircraft that will serve our country for decades to come.

### **Closing**

To protect our Nation and support our allies and partners, Navy Aviation programs require your continued support. As we prioritize our preparedness, we request your assistance to improve the resilience of our current force posture, modernize this key capability, and accelerate the technological advancements to address challenges in every domain. The modernization and recapitalization of our NUFEA fleet is a key piece in the overall effort to increase the lethality of the Navy in this increasingly complex global security environment.

**Addendum A****LOGISTICS SUPPORT AIRCRAFT****CMV-22B**

The FY 2019 President's Budget requests \$143.1 million in RDT&E for continued product improvements and development of the Navy variant, the CMV-22B; \$843.2 million in APN for seven Lot 23 CMV-22Bs, procurement of long lead items for FY 2020 (Lot 24) aircraft; and \$214.8 million to support 'Operations and Safety Improvement Programs' (OSIPs). Planned OSIP efforts include the correction of deficiencies, readiness improvements, common configuration modernization, aerial refueling, and avionics improvements.

**C-2 Greyhound**

As the DoN recapitalizes the long-range aerial logistics support and Carrier Onboard Delivery (COD) capabilities with CMV-22B, the C-2A fleet will continue to provide critical COD support for operations worldwide until the FY 2024 timeframe. The FY 2019 budget request provides for \$11.32 million in APN and \$0.8 million in RDT&E to manage remaining C-2A aircraft mission systems obsolescence, including critical Center Wing Section repair kits to maintain sufficient capacity and readiness to safely complete the transition to CMV-22B.

**End of Addendum A**

**Rear Admiral Scott D. Conn**  
**Director, Air Warfare, Office of the Chief of Naval Operations (OPNAV N98)**

Rear Adm. Scott Conn is a native of Lancaster, Pennsylvania, and a 1985 graduate of Millersville University of Pennsylvania. He was designated a naval aviator in May 1987. Conn is also a graduate of the Naval War College.

Conn's command tours include Carrier Strike Group 4; Naval Aviation Warfighting Development Center; Carrier Air Wing 11; the FA-18 series Fleet Replacement Squadron (FRS) Strike Fighter Squadron (VFA) 106; and VFA-136.

Conn's sea tours involved seven deployments on five different aircraft carriers in support of Operations Deliberate Force, Southern Watch, Deny Flight, Enduring and Iraqi Freedom. He has flown in excess of 100 combat missions, has accumulated over 4,700 flight hours and 1,000 arrested landings.

Ashore, Conn had multiple flying tours involving flight in the A-4, F-5, F-16 and FA-18 series aircraft. His staff tours include serving as the staff general secretary and U.S. Pacific Command (PACOM) event planner at the Joint Warfighting Center; as the executive assistant to Commander, U.S. Fleet Forces Command; and as the strike branch director for Director Air Warfare (N98) on the staff of the Office of the Chief of Naval Operations.

Conn was the recipient of the 2004 Vice Adm. James Bond Stockdale Inspirational Leadership award and is authorized to wear the Legion of Merit (six awards), Defense Meritorious Service Medal, Meritorious Service Medal, Air Medal (five Strike Flight), Navy and Marine Corps Commendation Medal (five awards, one with Combat "V") and the Navy and Marine Corps Achievement Medal, as well as various service and campaign awards.



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**QUESTIONS SUBMITTED BY MEMBERS POST HEARING**

SEPTEMBER 28, 2018

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### QUESTIONS SUBMITTED BY MR. COURTNEY

Mr. COURTNEY. The Air Force and the Navy are pursuing propeller modifications to legacy C-130Hs and the Navy C-130T. Do you believe that the NP2000 propeller modifications will help to prevent future propeller casualties and are you confident that the inclusion of the NP2000 system will not induce risk given it was not the original propeller system?

General HARRIS. All flight and operational testing conducted by the U.S. Air Force (USAF) indicates that installation of NP2000 propellers on C/LC-130H aircraft does not change the overall operational risk to these aircraft. Since 2005, USAF C-130 engineering has partnered with Lockheed Martin, Hamilton-Sundstrand, Rolls Royce, USAF test centers (Edwards AFB, Eglin AFB, Air National Guard Air Force Reserve Command Test Center), the Air National Guard and various integration companies to accomplish tasks necessary to integrate the NP2000 propellers onto USAF C-130H aircraft. Areas of concerns discovered were adequately addressed by additional USAF testing and redesign. Airworthiness of C/LC-130Hs with NP2000 propellers conforms to the requirements of the USAF military airworthiness process. To safely operate the aircraft, performance and handling differences between the original propeller system and the NP2000 have been documented in all appropriate technical orders, flight and maintenance manuals. The primary purpose of the NP2000 propeller is to improve the performance of the C/LC-130H aircraft in conditions where it is currently limited; for example, LC-130H aircraft are now able to takeoff from remote fields in Antarctica without the use of Jet Assisted Takeoff bottles and with much shorter takeoff distances. The USAF has accumulated approximately 4,000 flight hours including C/LC-130H flight test and LC-130H operational missions to Antarctica and Greenland. The USAF also shared the NP2000 certification data with Naval Air Systems Command (NAVAIR); the NP2000 propeller is currently installed on the following USN aircraft: 2 C-130T, 34 E-2D, 39 E-2C and 34 C-2A. The USN has accumulated over one million flight hours on the NP2000 propeller installed on these aircraft.

Mr. COURTNEY. Lieutenant General Kirkland, in your written testimony, you touched upon the importance of corrosion prevention and control. I understand that the Air Force has recently looked at adopting a new liner blanket technology for the C-130, originally developed for the Army's CH-47 fleet, and that this technology has the potential to significantly reduce corrosion to the airframe. Could you discuss this effort specifically, as well as the importance of corrosion control for the C-130 in general?

General KIRKLAND. Corrosion prevention and control remains one of the top sustainment drivers for the C-130. Much of the field and depot maintenance that is conducted on the C-130 is performed to identify, correct, and prevent corrosion. It is estimated that \$550M per year is expended on the C-130 in corrosion prevention and control. The C-130 Program Office has an active corrosion control program; to include, continued assessment of emerging and existing corrosion issues, incorporation of newly developed corrosion control measures, performance of up to 7 field visits per year, and holding regular Corrosion Prevention Advisory Board meetings. As part of the corrosion prevention and control efforts, the Improved Thermal Acoustic Blanket (ITAB) that was incorporated on the CH-47 was identified as a replacement for the existing aircraft interior insulation. The C-130 Program Office is currently working on a contract to procure prototype blanket kits to replace the interior insulation blankets. The new blankets will be a preferred spare to the current blankets and fleet implementation is planned to be carried out via attrition during programmed depot maintenance (PDM). The breathability, along with several other technical properties, of the improved blanket material will help to prevent corrosion. Additionally, the improved ITAB attachment methods will make interior aircraft inspections easier to accomplish and repair kits will enable unit-level repair of the improved blankets.

Mr. COURTNEY. The Air Force and the Navy are pursuing propeller modifications to legacy C-130Hs and the Navy C-130T. Do you believe that the NP2000 propeller modifications will help to prevent future propeller casualties and are you confident

that the inclusion of the NP2000 system will not induce risk given it was not the original propeller system?

Admiral CONN. NAVAIR has begun to modify 24 C/KC-130T aircraft with the NP2000 propeller. The NP2000 propeller is currently installed on the following Navy aircraft: 2 C-130T, 34 E-2D, 39 E-2C and 34 C-2A. USAF has installed the NP2000 propeller on 10 USAF C/LC-130H aircraft. USAF tested and certified the NP2000 installation on the C/LC-130H and updated performance manuals with modified procedures to safely operate the aircraft. USAF shared certification data with NAVAIR, which used it to determine airworthiness of the NP2000 propeller installed on Navy C/KC-130T aircraft. The same data was used to generate maintenance manuals, an operator's manual, and a performance manual to support fleet operations. USN has accumulated over one million flight hours on the NP2000 propeller installed on the E-2D/E-2C/C-2A fleet. USAF has accumulated approximately 3900 flight hours on C/LC-130H aircraft. The inter-service cooperation resulted in USN avoiding millions of dollars in redundant costs. Since NAVAIR used the USAF data to certify NP2000 propeller installed on the C/KC-130T, Navy was able to develop the modification package, modify the first aircraft and prepare for functional check flight in 97 days. This expedited NAVAIR certification process and aircraft modification is a key contributor to accelerating the restoration of the legacy C/KC-130T fleet to flight operations post grounding. NAVAIR has concluded that the NP2000 propeller system performance characteristics are slightly different than the legacy 54H60 propeller; however, the operational risk posture of the C/KC-130T aircraft remains unchanged.

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