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

DEPARTMENT OF THE AIR FORCE

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

SUBJECT: HEARING ON AIR FORCE BOMBER/TANKER/AIRLIFT ACQUISITION PROGRAMS - HASC SEAPOWER AND PROJECTION FORCES

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May 25, 2017

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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 U.S. Air Force acquisition programs. For the past 70 years, from the evolution of the jet aircraft to the advent of the ICBM, satellite-guided bombs, and remotely piloted aircraft, the Air Force has been breaking barriers as a member of the finest joint warfighting team on the planet.

In, through and from air, space, and cyber, the fabric of our Air Force weaves multi-domain effects and provides joint warfighters the blanket of protection and ability to power project America's full range of combat capabilities…we're 'Always There'. But, in a world of increasing threats, ever-improving adversaries, and a persistent war against violent extremism, there is a greater disparity than ever before between commitments and the resources necessary to provide unmatched Global Vigilance, Global Reach and Global Power. We are supporting Combatant Commander requirements in response to growing challenges from Russia, China, North Korea and Iran, in addition to the ever present counterterrorism mission in the Middle East and around the world. While our forces have been heavily engaged in deterring or addressing these operational challenges, our adversaries have taken the opportunity to invest in and advance their own capabilities. To address ever narrowing capabilities gap, the Air Force needs your support in the form of increased, steady and predictable authorization. Current caps imposed by the Budget Control Act will force the Air Force to continue making unacceptable tradeoffs between force structure, readiness, and modernization.

The nuclear enterprise remains our number one priority and the Air Force's nuclear capable bombers represent one of the two critical Air Force contributions to the Nation's nuclear

triad. In addition to operating two-thirds of the triad, our Airmen also resource 75% of the Nuclear Command, Control, and Communications (NC3) framework. Together, our nuclear and conventional bombers in concert with our tanker aircraft provide global reach and global power to ensure an effective deterrence. But both of these important fleets are aging. The average ages of the B-52 strategic bomber and the KC-135 tanker both exceed 50 years of age and both will be with us for a long while. Our bomber and tanker fleets require recapitalization to ensure our ability to project power and provide global deterrence. Rapid Global Mobility is also a vital Air Force core mission that makes us more agile, swift, and resolute in comparison to the world's Air Forces. Every 2.8 minutes, an Air Force's mobility aircraft takes off to deliver force – extending fuel to Air Force, joint, and coalition receiver aircraft, transporting critical personnel and cargo to airfields all over the world, or providing airdrop of time-sensitive supplies, food, and ammunition when and where it's needed. We are committed to providing the most effective bomber, robust tanker, and dominant fighter force to the nation. That is why our top three acquisition priorities remain the B-21 Bomber, the KC-46A aerial tanker, and the F-35A Joint Strike Fighter.

Bombers

As with the fighter force, the total bomber inventory has also been significantly reduced. To provide perspective, in 1991 we had 290 aircraft available within the bomber fleet versus 156 B-1s, B-52s, and B-2s today. The current number is insufficient to meet Defense Planning Guidance and nuclear guidance while sustaining current operational demands and maintaining sufficient training and readiness capacity.

B-21

The B-21 program remains one of the Air Force's top programs in regards to investment in research, development, test and evaluation with $2 billion for Engineering and Manufacturing Development (EMD) in the Fiscal Year 2018 President's Budget. The B-21 continues to make measured, positive progress and remains on track to deliver its initial capability in the mid-2020s.

The development phase of the program is well underway and the Government team has successfully completed an Integrated Baseline Review of our industry partner's performance measurement baseline for the overall B-21 development effort. Additionally, the program successfully completed a Preliminary Design Review demonstrating that the Air Force, along with its industry partners, are on the right track as they continue to develop the design maturity of this platform.

The Air Force remains committed to a fleet size of 100 B-21s. This fleet will provide capabilities necessary to meet future Combatant Commander requirements. The B-21 remains an absolute national defense priority and we are grateful for your continued support of this critical program going forward. Until the B-21 is fielded, it is equally important that we continue the commitment to modernize our legacy bomber fleet in order to maintain the ability of our Air Force to accomplish the mission to provide Nuclear Deterrence Operations, Nuclear Response, Global Strike, and Global Precision Attack.

B-1

The B-1B is a long-range, air refuelable multirole bomber capable of flying intercontinental missions with the largest payload of guided and unguided weapons in the Air

Force inventory. The Integrated Battle Station upgrade (FY18 PB FYDP - $210 million) will provide enhanced situational awareness and precision engagement capabilities and is the B-1B's largest modernization effort since its production. The first aircraft with this upgrade was delivered in January 2014 and a total of 32 B-1s are currently modified with this capability. The B-1B will complete this modernization effort in 2019.

Other efforts to update the B-1B's navigation and radar systems completed in early 2016. These efforts improve reliability and maintainability of these critical systems. Additionally, the Air Force has fully funded the Service Life Extension Program (SLEP) for B-1 engines. This funding will replace parts that have been degraded by nearly 15 years of combat and restore all 289 B-1 engines to their original specifications. Finally, ongoing testing is validating the B-1B's structural integrity to ensure that it remains viable through 2040.

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

B-2

The B-2 is the only long-range strike aircraft capable of penetrating and surviving advanced Integrated Air Defense Systems to deliver weapons against heavily defended targets. Its unique attributes of intercontinental range, precision strike, large conventional or nuclear payloads, ability to penetrate defenses, and low observable profile allow it to execute Nuclear Deterrence Operations, Nuclear Response, Global Strike, and Global Precision Attack missions.

The Air Force will continue to modernize the B-2 to ensure it remains effective as enemy defensive systems advance. Current efforts to modernize the Defensive Management System ($1,399.2 million within the FYDP) will ensure the B-2 can continue to counter sophisticated air defense networks and operate in highly contested environments.

The Air Force will continue development efforts to re-host the Stores Management Operational Flight Program software in the Flexible Strike program ($21.3 million remaining within the FYDP, total program $209.3 million), enabling the B-2 to take advantage of advanced digital weapon interfaces such as those used by the B61-12. The Air Force has completed development efforts and started procuring hardware for the Common Very-Low-Frequency / Low Frequency (VLF/LF) Receiver program, and will begin fielding the system in FY-2019 ($23.6 million remaining within the FYDP, total program $192.4 million). It provides the B-2 with a VLF/LF receiver for secure, survivable strategic communications capability.

In addition to the VLF/LF upgrade, is the Extremely High Frequency Satellite Communications (EHF SATCOM) program, a modification effort that provides a high bandwidth, secure, survivable strategic communications capability. The program is planning on awarding its Technical Maturation and Risk Reduction (TMRR) contract in October 2018 ($1.09B within the FYDP). Except for delivering spares hardware, the Air Force has completed fielding the Extremely High Frequency Satellite Communications and Computer Increment 1 program, a mid-life avionics upgrade to the flight management computers and digital storage and data buses ($0.2 million remaining within the FYDP, total program $540.4 million). We continue to modernize the B-2 with new efforts beginning in Fiscal Year 2018. These efforts include Airspace Compliance for ADS-B Out (Automatic Dependent Surveillance – Broadcast), Mode S, and Mode 5 to satisfy FAA and Identification Friend or Foe (IFF) requirements ($83.3

million total cost); replacing the Crash Survivable Memory Unit to satisfy Aircraft Information Program requirements ($15.1 million total cost); procuring additional B-2 Monitor and Control Equipment for the GBU-57 Massive Ordnance Penetrator ($40 million total); and procuring the B-2 hardware supporting integration of the B61-12 weapon ($27.5 million total). Finally, the Air Force will continue to pursue a number of B-2 sustainment initiatives to improve aircraft supportability and increase aircraft availability.

B-52

The last B-52H Stratofortress entered service in the United States Air Force in 1961, and it remains our nation's oldest and most versatile frontline long-range strategic bomber. We expect to continue operating the B-52 for many years to come continue to invest in modernization programs to keep the platform operationally relevant and updated with state-of-the-art capabilities. Major modernization efforts include the Radar Modernization Program (RMP) ($551 million FYDP), Combat Network Communications Technology (CONECT) ($271.4 million for FY18 FYDP), and 1760 Internal Weapons Bay Upgrade (IWBU) programs ($67.5 million for FY18 FYDP). RMP will modernize the current Strategic Radar (AN/APQ-166). Current radar is based on 1960's technology, last modified in the 1980s. The radar upgrade will maintain platform viability beyond 2040. The FY18 PB also includes $10 million for the re-engining for risk reduction activities. These efforts will include an assessment for a potential full program—looking at the legacy TF33 engines and engine components of the entire propulsion system.

CONECT provides an integrated communication and mission management system as well as a machine-to-machine interface for weapons retargeting for the entire fleet of 75 B-52Hs.

The digital infrastructure and architecture provided by CONECT is the backbone for the 1760 IWBU and future modification efforts. The 1760 IWBU provides internal J-series weapons capability through modification of Common Strategic Rotary Launchers (CSRLs). Both increments of this program are fully funded and, when complete, will significantly increase the B-52's capability to store and deliver the Joint Direct Attack Munition (JDAM); Laser-JDAM; Joint Air-to-Surface Standoff Missile (JASSM) and its extended range variant; and the Miniature Air Launched Decoy (MALD) and its jamming variant. The Air Force is committed to modernization of the B-52 using modern technology to ensure the aircraft remains relevant through 2050+ as an important element of our nation's defenses.

C-17

The C-17 is the only aircraft that combines tactical capability with strategic range to operate from austere airfield environments. The fleet of 222 aircraft was completed in September 2013 and provides our nation unmatched flexibility to conduct theater and inter-theater direct delivery, airdrop, aeromedical, and special operations airlift missions. In order to increase budget and schedule predictability, our plan is to bundle modernization and sustainment activities. Agile and efficient software and hardware updates will pace timely readiness, safety, and capability improvements as this premier airlift platform helps to achieve our national security objectives.

The Air Force intends to use $210.8 million in FY18 procurement funds to continue critical sustainment, modifications, and upgrades to the C-17 fleet. This includes Identify Friend or Foe (IFF) and Next Generation Communication, Navigation, Surveillance/Air Traffic Management (CNS/ATM) to provide Automatic Dependent Surveillance – Broadcast (ADS-B) Out capability to ensure access to global airspace by meeting mandated civil airspace

requirements around the world. Additionally, $34.3 million of FY18 RDT&E funding will address obsolescence and flight safety issues. The development of a replacement Heads Up Display (HUD) will address obsolescence of the current C-17 HUD and improve the system's availability, reliability, and maintainability. The Beyond Line-Of-Sight (BLOS) communication system effort modernizes multi-channel voice and data communication subsystems to ensure the C-17 keeps pace with changes in DoD communication infrastructures.

C-5

The Air Force continues to modernize and enhance 52 legacy C-5 aircraft to a common configuration to ensure fleet viability and reliability to 2040. The C-5 Reliability Enhancement and Re-engining Program (RERP, or C-5M) is a comprehensive effort to improve aircraft performance, reliability, maintainability, availability, and payload capability/cargo throughput. All 52 aircraft were inducted as of January 2017 and the final aircraft is projected to be complete in April 2018.

During the first week of March 2017 an upgraded C-5 Super Galaxy flew a cargo mission from Travis AFB, California to Yokota AB, Japan, without stopping or refueling. According to the user community, the upgraded "M" version of the aircraft has the range and fuel efficiency to skip a layover at Joint Base Pearl Harbor-Hickam, Hawaii, or Joint Base Elmendorf-Richardson, Alaska. This range and payload capability saves time, fuel, and money for the Air Force. The increased reliability and reach of the C_5M Super Galaxy typified our Global Reach.

The FY18 PB requests $50.6 million in procurement funds, predominately for C-5 core mission computer/weather radar (CMC/WxRdr) system equipment. Additionally, the FY18 PB requests $22.8 million in RDT&E funding in FY18 to support CNS/ATM upgrades, including

ADS-B Out modifications required for global airspace compliance. The C-5 CMC/WxRdr system replaces an antiquated radar system with severe Diminishing Manufacturing Source (DMS) issues and upgrades the CMC processor to adequately handle the demands of future software modifications. Finally, the FY18 PB invested in moving 8 C-5 aircraft from BAI to PAA status at a rate of 2 per year starting in FY18.

Tankers

Comprised of 396 KC-135 Stratotankers and 59 KC-10 Extenders, our tanker fleet provides the backbone of rapid U.S. global operations. Delivery of 179 KC-46 Pegasus aircraft by 2028 will replace less than half of the current tanker fleet and will leave the Air Force with over 200 aging KC-135s awaiting recapitalization. Tankers are the lifeblood of our joint force's ability to respond to crises and contingencies and are essential to keeping our Air Force fueled as a global force.

KC-135 and KC-10

The average KC-135 is 56 years old; KC-10s are an average of 32 years old. Both fleets are frequently challenged by aircraft parts obsolescence and DMS issues. However, with the help of both organic Air Force depots and industry, we are able to maintain these platforms as effective and safe weapon systems for the warfighter. We are executing several key modernization initiatives to ensure out legacy tanker fleet remains viable through 2045.

The FY18 PB requests $69.4 million to continue KC-135 modernization efforts. The primary modernization effort for KC-135 is the Block 45 program, which addresses supportability, reliability, and maintainability issues. Block 45 is an avionics upgrade for the Stratotanker fleet that modernizes legacy flight and engine instruments by integrating a digital

flight director, autopilot, radio altimeter, and electronic engine instrument display for our operators.

Furthermore, the FY18 PB also requests $111.5 million to support our KC-10 fleet through its planned sunset, including the funding for service bulletins, sustainment, and Mode 5 CNS upgrades. Mode 5 is a development effort to complete a DoD-mandated upgrade to the Identification Friend of Foe systems on its aircraft planned for implementation in FY20. The FY18 PB also funds ADS-B Out system modifications on 24 of its KC-10 aircraft to comply with global airspace requirements mandated for implementation in CY20. The Air Force intends to recapitalize the KC-10 fleet as part of its legacy tanker recapitalization strategy with KC-10 requirements beginning no earlier than FY19, dependent on KC-46A delivery schedules.

KC-46

While we continue to sustain our current tanker capability, recapitalizing our aging tanker fleet remains one of our top acquisition priorities. After a successful Milestone C decision in August 2016, the Air Force exercised contract options for aircraft Lots 1 and 2 (19 aircraft total), 4 spare engines, and 10 Wing Aerial Refueling Pod shipsets. The Air Force awarded Lot 3 (15 aircraft) on 27 January 2017 under the authorization of an anomaly in the FY17 Continuing Resolution.

The KC-46 test program is progressing, albeit slower than planned. Boeing's design of several subsystems and production of conformed hardware are still pending FAA approval, which is slowing flight test execution. The test program is also running behind planned pace because several test aircraft are undergoing upgrades to incorporate design changes. Boeing is several months behind schedule, which means the first aircraft will likely to deliver after

September 2017. In the FY18 PB, the Air Force requests $93.8 million for the ongoing KC-46 EMD effort and $2.6 billion to award LRIP Lot 4 (15 aircraft) in January 2018. The procurement of these aircraft continues the Air Force's plan to acquire 179 KC-46s by FY28, as we work recapitalization of the legacy tanker fleet.

The KC-46 Formal Training Unit (FTU) will be located at Altus AFB, Oklahoma, with Main Operating Base (MOB) #1 at McConnell AFB, Kansas, and MOB#2 at Pease Air National Guard Base, New Hampshire. Seymour-Johnson AFB, North Carolina is the Preferred and Reasonable Alternative for MOB#3. Furthermore, JB McGuire-Dix-Lakehurst and Travis AFB were announced as the Preferred & Reasonable Alternatives for Main Operating Base (MOB) #4a and 4b in January 2017.

Stability of requirements and funding are the keys to KC-46 program success and will enable the Air Force to deliver this new tanker, ready for employment on day one. However, KC-46 is just phase one of a three-phase acquisition strategy to recapitalize the Air Force's legacy tanker fleet, and sufficient funding of phases two and three (KC-Y & KC-Z) will be required to keep our tanker fleet viable and relevant for years to come.

C-130

The C-130 fleet is diverse and consists of legacy C-130H and C-130J aircraft, as well as special mission aircraft (AC/LC/MC/HC/WC-130s). The C-130Hs and C-130Js are medium-size transport aircraft capable of completing a variety of tactical airlift operations across a broad range of mission environments. The fleet delivers air logistic support for all theater forces, including those involved in combat operations.

The Air Force is modernizing the C-130H fleet through a four-pronged approach emphasizing aircraft safety, compliance, modernization and recapitalization. First, we are ensuring the C-130H is safe to operate by keeping the aircraft structurally sound through programs such as center wing replacement. The C-130H Center Wing Replacement effort replaces Center Wing Boxes (CWB) on C-130Hs whose center wings' service life will expire and is a critical safety effort. The Air Force adopted a three-pronged approach to mitigate C-130 CWB fleet fatigue: 1) restrict aircraft at 38,000 Equivalent Flight Hours (EFH); 2) inspect/repair CWB until 45,000 EFH; 3) ground at 45,000 EFH or replace the CWB. Second in the four-pronged approach, we will focus on meeting U.S. and foreign airspace compliance mandates through the C-130 Avionics Modernization Program (AMP) Increment 1. Third, C-130 AMP Increment 2 will improve the fleet's maintainability and reliability by providing a new avionics suite, enhanced communications, and electrical improvements; solving pending obsolescence and DMS issues. The FY18 PB maintains full funding for AMP Increments 1 and 2. Finally, as detailed in the April 2017 C-130H Recapitalization and Modernization Report to Congress, due to fiscal constraints and the need to address areas of greater risk, at this time there is no room within existing Air Force resources to purchase additional C-130Js beyond the current program. The Air Force intends to recapitalize or modernize each of the Air National Guard (ANG) and the Air Force Reserve Command (AFRC) C-130H units. The Air Force also intends to continue recapitalizing AFSOC's Special Operations C-130Hs with C-130Js (AC/MC-130Js).

The C-130J aircraft provides extra cargo carrying capability, longer range, and better fuel efficiency for our combat delivery mission, compared to legacy C-130Hs. 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). Current modification efforts include center wing replacement, LAIRCM, and the ADS-B Out capability to meet mandated civil and international airspace requirements as part of the C-130J Block 8.1 upgrade. The FY14 National Defense Authorization Act authorized multi-year procurement for the C-130J. As part of the multi-year contract, the Air Force is procuring 72 C-130Js (all variants) through FY18.

Conclusion

The Air Force remains committed to our top three acquisition programs, B-21, KC-46, and F-35. In the midst of the challenges ahead we will aim to keep these programs on track and deliver these systems not only as a vital capability to our forces, but also as a best value to our taxpayer. These systems will provide the future capabilities necessary to operate effectively in the national warfighting environment of tomorrow.