

NOT FOR PUBLICATION UNTIL RELEASED BY
THE SENATE ARMED SERVICES COMMITTEE
AIRLAND SUBCOMMITTEE

STATEMENT OF

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DEPUTY COMMANDANT FOR AVIATION

BEFORE THE

AIRLAND

SUBCOMMITTEE

OF THE

SENATE ARMED SERVICES COMMITTEE

ON

FISCAL YEAR 2009 MARINE CORPS AVIATION PROGRAMS

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I. Introduction

Chairman Lieberman, Senator Cornyn and distinguished Members of the Subcommittee, it is a privilege for me to appear before you today to discuss Marine Corps aviation. The significant accomplishments of those who serve our Nation are a direct reflection of the tireless efforts and consistent support of the military by this Committee. Thank you for your dedication and oversight.

Marine Corps aviation continues to add to its rich legacy in the skies over Iraq and in support of operations with our friends and allies around the world. We have been fully engaged for the last six and a half years and we are prepared to continue that same level of operational tempo as long as it is required. We remain ever mindful of the historical precedence the Marine Corps has set through a virulent devotion to operational preparedness, fiscal responsibility and world class care of our Marines, Sailors and their families. This methodology has served us well in the past and will continue to do so in the future.

II. Stress on the Force - Aviation Commitments

These challenging times have highlighted the ever present need to expand, modernize and train our forces to cope with an uncertain future. Within Marine aviation, our sustained contributions to the current fight have necessitated a concerted effort to re-energize our commitment to readiness as the foundation of a flexible and adaptable warfighting force. We seek to maintain capabilities across the full spectrum of conflict in order to ensure our aging platforms and equipment seamlessly evolve into a future force that is characterized by integrated, cooperative, and distributed capabilities and concepts. Our vision portends a network-enabled and digitally interoperable expeditionary Aviation Combat Element (ACE) postured to execute responsive, persistent, lethal and adaptive full-spectrum operations. Within that framework, we have articulated three primary goals that will chart the course of Marine aviation for years to come. First, we expect to sustain our wartime operational tempo while improving current readiness and combat effectiveness through the efficient use of resources. Second, we will execute our planned type/model/series (T/M/S) transition strategies from our legacy platforms to the advanced capabilities associated with next generation platforms: F-35B, MV-22, UH-1Y, AH-1Z, KC-130J, CH-53K and Unmanned Aerial Systems (UAS). Finally, we will improve warfighting integration by developing new transformational concepts of operation (CONOPS) that will significantly enhance the systems that we are acquiring.

The Fiscal Year (FY) 2009 President's Budget request balances sustainment of legacy aircraft that are performing ably in current operations with continued recapitalization of more modern capabilities. The stress on the legacy forces remains considerable as our level of commitment has been sustained at a surge rate for the past several years. Before the current conflict, Marine aviation had a recurring commitment for 21 squadrons deployed with an additional 15 squadrons in training workups preparing to deploy. With the recent addition of the 24th Marine Expeditionary Unit (MEU) deployment to Afghanistan while our squadrons are still engaged in Iraq, our level of commitment is now 47 squadrons, with 68% of Marine aviation currently deployed or preparing to deploy.

Responding to the pressures of sustaining high operational tempo in support of current operations, Marine aviation has sought the means to mitigate the effects of these stressors. First, particularly in the case of our aging legacy platforms (F/A-18, AV-8, CH-46, UH-1N, AH-1W and CH-53D), we carefully manage risk and seek to optimize support to our warriors in combat through the application of sound airframe service life management initiatives. With exceptional leadership evident throughout the force, our aviation mishap records in 2006 and 2007 were the second and third lowest in our history. Second, we have become full partners in the Naval Aviation Enterprise (NAE) in order to place us on a path to achieve optimized readiness and sustain the health of our assets into the future. The operational business models, support plans, and cooperative work exchanges resident within the NAE construct will lead to improved readiness and prepare our resources for future growth and transition. Third, we are optimizing the growth of aviation as the Corps continues on a path to 202,000 Marines. This planned increase in manpower will enable us to train to the full spectrum of military operations while improving the ability of Marine aviation to address the future challenges of an uncertain environment. Our future growth in personnel will reduce operational risk and recover our ability to respond to the clearly articulated needs of the Combatant Commanders.

III. Sustainment of Legacy Aircraft and Systems

The Marine Corps' aging fleet of fixed and rotary wing aircraft is the oldest in the Department of Defense. Exacerbating the impact of combat losses and high operational tempo, legacy aircraft production lines are no longer active. Sustaining these legacy aircraft has become increasingly more expensive and time consuming for our maintainers. For each legacy platform, we strive to make prudent investment in systems upgrades as a mitigating bridge to the future

capabilities we desperately need. The Marine Corps' Tactical Aviation (TACAIR) platforms, the AV-8B *Harrier*, the F/A-18 A+/C/D *Hornet* and the EA-6B *Prowler*, are rapidly approaching the end of their planned service lives. Many of our assault support platforms, including the CH-46 *Sea Knight*, the UH-1N *Huey*, the CH-53D *Sea Stallion* and the KC-130F/R *Hercules*, date back to the Vietnam era yet they continue to deploy at extremely high turnaround rates in order to meet Marine aviation's requirements in support of global commitments. Currently flying between two and five times their programmed utilization rates while in support of operations in Iraq, these aircraft must remain relevant, not only to the irregular fight we're in now, but also to the multitude of contingencies our forces may face in the future.

AV-8B Harrier

The FY 2009 Budget requests \$29.9M RDT&E funds to support development of the AV-8 Engine Life Management Plan (ELMP)/Engine Monitoring System, Tactical Moving Map Display, the Readiness Management Plan (RMP), and moving the LITENING targeting pod to the aircraft's centerline station. This effort will increase the ordnance carriage capability of the Harrier to better support combat operations. The FY 2009 Budget also requests \$54.5M procurement funding for the Open Systems Core Avionics Requirement (OSCAR), ELMP upgrades, and the RMP, which addresses aircraft obsolescence and deficiency issues associated with sustaining the current AV-8B fleet. Additionally, the LITENING targeting pod will be upgraded to the latest configuration to better support the warfighter. Finally, the AV-8B program is upgrading a day attack aircraft to a night attack configuration as part of the attrition recovery effort to address significant legacy inventory shortfalls until transition to the F-35B.

F/A-18 A+/C/D Hornet

The FY 2009 Budget requests \$96.4M (APN-5) for the continuation of the systems upgrade programs for USMC legacy F/A-18 platforms. Included in this request is the continued procurement of successful programs such as Joint Helmet Mounted Cueing System, Multi-Function Information Distribution System, and Digital Communications System. The Marine Corps continues avionics upgrades to Lot 7 through Lot 9 Hornets, as well as upgrading other F/A-18 aircraft with digital communications and tactical data link. The ongoing upgrade to the F/A-18C/D with digital communications, tactical data link and tactical reconnaissance systems ensures our F/A-18s remain viable on the battlefield and relevant partners in the Department of the Navy's

Tactical Air Integration plans. We are experiencing great success employing the LITENING targeting pod on the F/A-18A+/C/D aircraft in OIF. When combined with data link hardware and the Rover Ground Station, the LITENING pod provides real time video to ground forces engaged with the enemy, adding a new dimension to precision fires and Intelligence, Surveillance, and Reconnaissance (ISR). Our fleet of legacy F/A-18D's is currently flying at three and half times their programmed rate. Given this high utilization rate, our sustainment initiatives are critical to ensuring we have adequate numbers of F/A-18's to meet our requirements until we transition to the F-35B.

EA-6B Prowler

The Marine Corps remains fully committed to the EA-6B as we look to enhance our legacy capabilities and posture to create a future Electronic Warfare (EW) capability comprised of a networked system-of-systems (F-35B, Unmanned Aerial Systems and other relevant air and ground systems). The Prowler continues to maintain an extremely high deployment tempo supporting operations against growing and diverse irregular warfare threats. Ongoing structural improvements and the planned Improved Capabilities III upgrades have extended the aircraft's service life and will deliver increased capability through its Program of Record of 2016. The Prowler has the highest utilization rate of any aircraft in our inventory while operating at an unprecedented five times its peace time utilization when deployed to Iraq. The FY 2009 Budget requests \$33.4M for the procurement of ALQ-99 pod upgrades to sustain the capability of this national asset until it is replaced by the constituent components of a networked array of EW systems.

CH-53D/E Sea Stallion

The CH-53D/E Sea Stallion provides unparalleled combat heavy lift to the Marine Air Ground Task Force (MAGTF). While these aircraft are achieving unprecedented operational milestones, they are reaching the end of their service life (the CH-53D has been operational for over 38 years and CH-53E is approaching 30 years) and will be incapable of supporting the Marine Corps' future warfighting concepts. To keep these platforms viable until the CH-53K is procured, the FY 2009 Budget requests \$56.4M targeted at a variety of near-term enhancements including the Force XXI Battle Command Brigade and Below (FBCB2) Blue Force Tracker, ballistic armor kits, T-64 Engine Reliability Improvement Program kits and improvements to engine operation at

increased Power Inlet Temperature (T5) operating limits for increased power margin at higher operating altitudes.

CH-46E Sea Knight

The venerable CH-46E continues to perform well and is poised to maintain operational relevancy through its projected retirement in 2018. The FY 2009 Budget requests \$34.6M targeted at improvements and enhancements in dynamic components, avionics, and ASE that will sustain the health of the airframe as we progress through the transition to the MV-22. Only the Marine Corps could maintain a fleet of helicopters that will be over 50 years old when they retire and yet still remain relevant and engaged in the protection of the nation. This is a true testament to the men and women of the CH-46 community who work so hard to keep these aircraft in the fight.

AH-1W Cobra/UH-1N Huey

Sustaining and improving our aged utility and attack helicopter fleet is an imperative necessary to support our deployed forces while we continue our efforts to upgrade the UH-1N and AH-1W to the Yankee and Zulu variants, respectively. The FY 2009 Budget requests \$6.4M for the AH-1W and \$8.9M for the UH-1N. Current upgrade efforts to the legacy AH-1W include 20MM cannon reliability enhancements and completion of the turned exhaust modification. UH-1N funding is requested to procure BRITE Star Block II night vision systems that will forward fit into the UH-1Y. These essential enhancements will ensure that both the UH-1N and the AH-1W are reliable, survivable, and lethal until the transition to the Yankee and Zulu is complete.

VH-3D/VH-60N

The FY 2009 budget requests an investment of \$40.2M that will be used to extend the operational life and improve the capabilities of our legacy Presidential Support Aircraft (VH-3D and VH-60N). The improvements to our executive transport fleet focus on key component upgrades combined with a Service Life Assessment/Extension Program. The key component upgrades for the VH-3D will be the addition of Carson Blades as part of the Lift Improvement Program and several survivability improvements. VH-60N upgrades will focus on technology insertion in a cockpit upgrade. The investment in both aircraft will include a Service Life Assessment/Extension Program which will ensure continued safe and reliable executive transport until integration of the VH-71 occurs.

Aircraft Survivability Equipment (ASE)

In order to provide increased protection for our critical assets we have developed and procured improved ASE for assault support aircraft. We continue to mitigate threats to rotary wing aviation through a combination of tactics, centralized command and upgrades to existing equipment. To prevent current technology lagging behind the threat, increased Science and Technology (S&T) focused on developing the next generation helicopter survivability equipment is required. For FY 2009 the Department of the Navy has requested \$38.9M for continued Directed Infrared Countermeasures (DIRCM) RDT&E, and hardware procurement (APN-1/5/6). This state-of-the-art ASE will enable Marine aviation to pace the threat of advanced anti-aircraft systems proliferation. Funds obligated to date have been used for development and first year procurement which will begin delivery of 72 systems in October 2008. The remaining unfunded portion is for an additional 70 systems equating to one year production capacity in 2009. Continued support of this critical need for our fleet of aircraft is greatly appreciated as we ensure our pilots and aircrew have the most current survivability technology available to them.

Aviation Weapons Programs

Over the past year Marine aviation flew over 115,000 combat hours, delivered over 2,700 precision-guided munitions, and dropped over 4,000 bombs. The FY 2009 Budget requests includes funding for precision-guided munitions (PGM) programs that will directly support combat operations.

a. Joint Air to Ground Missile (JAGM). The Marine Corps has expended over 1,500 Hellfire and 1,000 TOW air-to-ground missiles in support of ground forces engaged in combat since 2003. A low collateral damage PGM for moving targets, like JAGM, is critical for Marine aviation as a replacement for our aging stockpiles of TOW, Hellfire and Laser Maverick family of weapons. The FY 2009 budget requests \$183.7M.

b. Advanced Precision Kill Weapon System (APKWS). The past year has witnessed the successful test firing of the laser guided 2.75" rocket. This initiative seeks to provide a precision capability to a once unguided rocket fired from attack helicopters. The \$6M provided by Congress in FY 2008 ensured continued development of this capability and the FY 2009 Budget request of \$13.1M will complete development in anticipation of procurement beginning in 2010.

IV. Resetting the Force

Resetting Marine aviation means getting more capable and reliable aircraft into the operational deployment cycle sooner; not merely repairing and replacing damaged or destroyed aircraft. The operational demands and harsh environments of Iraq, Afghanistan, and the Horn of Africa highlight the limitations of our aging fleet. While deployed, our aircraft are flying at two to five times their designed utilization rates (Figure 1).

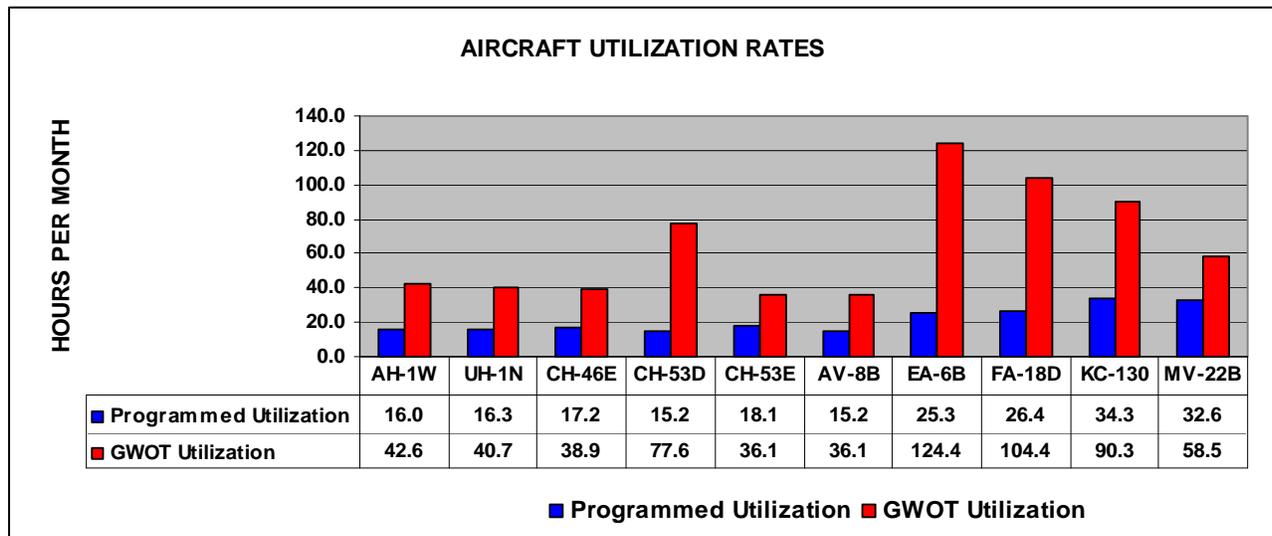


Figure 1

Maintaining the readiness of our aviation assets, while preparing aircrews for their next combat rotation is, and will continue to be, an enormous effort and constant challenge for our Marines. To maintain sufficient numbers of aircraft in deployed units, our non-deployed squadrons have taken significant reductions in aircraft and parts, thus resulting in a 30% decrease in the number of non-deployed units that are “deployment capable” over the last five years.

Reset programs have helped us mitigate degradation of our aircraft materiel readiness through aircraft modifications, proactive inspections and additional maintenance actions. The reset funding provided by Congress has been absolutely essential to our ability to maintain and sustain our legacy force during this stressful period. Moreover, it has enabled us to create avenues to build the long term health of Marine aviation and served as a catalyst to establish reliability-centered processes and practices with proactive and forward looking metrics. Continued funding support is critically needed as we are simply running short of aircraft on our flight lines due to age, attrition and wartime losses.

Our Current Readiness (CR) aviation logistics improvement strategy is now a mature pillar within the Naval Aviation Enterprise. We have developed a clear set of readiness improvement goals and implemented business rules that provide top-down performance alignment from the Marine Force (MARFOR) Commanders and the Deputy Commandant for Aviation down to individual squadrons. The Marine Aviation Executive Readiness Board (MAERB), comprised of the four Wing Commanders and Deputy MARFOR Commanders, provides recurring oversight to the process which is enabled by T/M/S teams, each led by a subject matter expert Marine Aircraft Group Commander. The T/M/S teams define their standards and readiness goals and provide focus of effort and alignment to AIRSpeed concepts (the integrated application of theory of constraints, Lean and Six Sigma). This process not only enables efficiencies in the current maintenance and supply environment, but also postures our logistics effort for future success as we neck-down our airframes in concert with the Marine Aviation Plan.

Improved aviation logistics readiness processes and dedicated reset programs have helped us mitigate degradation of aircraft materiel readiness through the wise application of aircraft modifications, proactive inspections and additional maintenance actions. These efforts have successfully bolstered aircraft reliability, sustainability and survivability even in the face of high utilization rates. Nevertheless, additional requirements for depot level maintenance on airframes, engines, weapons and support equipment will continue well beyond the conclusion of current hostilities.

V. Modernizing Marine Aviation

The Marine Aviation Plan (AvPlan) provides the way ahead for Marine aviation over the next 15 years as we transition 39 of 69 squadrons from 13 legacy aircraft models to 6 new ones. The AvPlan also incorporates individual program changes and synchronizes aviation equities in support of our end strength growth to 202,000 Marines.

F-35B Lightning II (Joint Strike Fighter (JSF))

The December 2007 rollout of the first production F-35B Short Take-Off / Vertical Landing (STOVL) aircraft marked the beginning of the transition from production to testing of the technologically superior 5th generation platform that is destined to become the centerpiece of Marine TACAIR. Over a decade ago, with exceptional support from visionaries in the Congress, the Marine Corps made a conscious decision to make the MV-22 *Osprey* and the F-35B *Lightning*

II the center pieces of our future warfighting concepts of operation. As the first combat deployment of Osprey comes to a close this week, our abiding belief in the significant benefits of tilt-rotor technology has been validated in the skies over Iraq. We are similarly committed to the vitally important enhanced 5th generation warfighting capabilities resident in the Joint Strike Fighter. STOVL JSF enables flexible distributed shipboard and expeditionary airfield basing, rapid response to crises, high sortie generation rates, a small footprint and vastly improved survivability. STOVL is predicated on the utility of a forward basing concept at a time when conventional basing and access are projected to be less and less available – either through risk of enemy attack or the vagaries of politically imposed operating restrictions. Along with the MV-22, the F-35B will be the cornerstone of Marine aviation and a critical enabler of the future Marine Air Ground Task Force (MAGTF) for many decades to come.

In the next year, we expect to see issues resolved and expectations achieved that will ensure our planned F-35B Initial Operational Capability (IOC) in 2012. F-35B development is on track with the first flight of BF-1 (the JSF STOVL variant) scheduled for the summer of 2008. The System Development and Demonstration (SDD) program for the F-35 Pratt & Whitney engine has also progressed steadily, leveraging heavily on the investment made in the Pratt & Whitney F-119 engine for the F-22. Ultimately, the Lightning II will replace our aging F/A-18 and AV-8 legacy fleet with state-of-the-art aircraft that will be fully network enabled and digitally interoperable in support the MAGTF across the full spectrum of combat operations.

As we manage the bridge to F-35B, we will continue to take prudent measures to mitigate our legacy TACAIR shortfall. A declining AV-8B inventory has already required a reduction in AV-8B Primary Assigned Aircraft (PAA) and has increased the operational tempo of our seven deployable Harrier squadrons. We have accepted additional near term risk by placing four F/A-18 squadrons in cadre status. We plan to recoup the AV-8B PAA adjustments and return the four F/A-18 squadrons to active status as JSF is delivered. If our TACAIR shortfall unexpectedly accelerates or the bridge to F-35B lengthens, we will take whatever steps are necessary to further mitigate the impact.

Adequate investment in legacy sustainment, combined with prudent management of airframe life expenditure and a properly funded F-35 program, will be the key factors in ensuring the Marine Corps' TACAIR transition from legacy to 5th generation occurs seamlessly. There are numerous variables to the TACAIR shortfall and all are closely monitored to ensure that a balanced set of choices are always available. A 2012 IOC best supports the Marine Corps'

transition strategy and any delay would increase risk to the Marine Corps in the short term by exacerbating the TACAIR shortfall. While we have time to execute other options should conditions change, at this point in time the Marine Corps' confidence in F-35B has never been stronger. The FY 2009 budget requests eight aircraft for delivery in FY 2010. These aircraft will support pilot transition training and are essential to preserving our IOC of FY 2012. This budget provides a fiscally responsible approach to a TACAIR inventory that confirms our strongly held belief that the F-35B is the right aircraft for the future of our Corps.

Future of Electronic Warfare

Beyond the Prowler, the future of EW within the Marine Corps will be comprised of a networked system-of-systems. The constituent components of this network include the F-35B Joint Strike Fighter, with its impressive array of embedded EW capabilities; UAS capable of carrying scalable and specifically tailored EW payloads; ISR pods and payloads; Next Generation Jammers (NGJs) operating from multiple platforms; and ground systems already fielded or under development. This system will possess both offensive and defensive capabilities. A key tenet of our future vision is the array of EW capabilities accessible throughout the battle space, not just those that reside on dedicated EW platforms, with the individual pieces of hardware used as tentacles of the distributed EW network. This is a critical and important distinction that promises to make USMC EW capabilities more readily available and applicable to MAGTF and Joint Force Commanders of the future in ways that are only now beginning to be well understood and exploited.

MV-22 Osprey

The transformational tilt-rotor MV-22 is now in Full Rate Production (FRP). The 360 MV-22 aircraft planned for procurement by the Marine Corps will bring revolutionary assault support capability to our forces in harm's way. The MV-22 is replacing the CH-46E aircraft which is over forty years old and has limited lift and mission capabilities to support the MAGTF.

The FY 2009 Budget requests \$2.2B in APN for procurement of 30 MV-22s and the continued development of follow-on block upgrades. Like the F-35, the MV-22 has implemented a block improvement strategy. Block "A" aircraft are training aircraft, Block "B" are operational aircraft, and Block "C" aircraft are operational aircraft with mission enhancements that will be procured in FY10 and delivered in FY12.

The current inventory of 57 operational MV-22 aircraft are home based at Marine Corps Air Station New River, North Carolina. Our AvPlan projects the transition of two CH-46 HMM squadrons to VMM squadrons each year by leveraging the procurement of 30 aircraft per year in concert with the Multi-Year Procurement (MYP) plan that was approved in FY 2008. At the current rate of production, the transition to MV-22 will be complete in 2018.

With Initial Operational Capability (IOC) declared last June, the MV-22 program met another important milestone when VMM-263 deployed to Al Asad Air Base, Iraq in October 2007. Supporting our Marines in combat, the MV-22 has performed beyond expectations. Flying at almost twice the designed utilization rates, the squadron has averaged seven out of ten mission ready (70% MR) aircraft per day for the five months of this initial combat deployment. As an example of the Osprey's operational utility, a flight of just two MV-22s can accomplish its assigned missions in half the time it takes four CH-46s to carry out the same tasks. Additionally, the aircraft's operational reach spans the entire range of the area of operations assigned to Multi-National Force – West in Iraq while flying a majority of its mission profile outside the typical assault support threat envelope. The fleet needed an aircraft that could take us farther, faster, and safer – and now thanks to the foresight and support of Congress, it is here.

KC-130J Hercules

KC-130J Hercules aircraft are continuously deployed in support of Operation Iraqi Freedom providing multi-mission, tactical aerial refueling, and fixed-wing assault support. Its theater logistical support reduces the requirement for resupply via ground, limiting the exposure of our convoys to Improvised Explosive Devices (IEDs) and other surface-borne attacks. The recent introduction of the aerial refuelable MV-22, combined with the retirement of the legacy KC-130F/R aircraft due to fatigue life and parts obsolescence, requires accelerated procurement of the KC-130J.

The Marine Corps is programmed to procure a total of 46 aircraft by the end of FY 2013. To date, 29 new aircraft have been delivered, seven more are on contract and two aircraft are requested in the FY 2009 Budget for a total of 38. This is still 13 aircraft short of our inventory objective of 51 KC-130Js for the Active Force. Ultimately, the Marine Corps will also seek to replace our 28 reserve component KC-130T aircraft with KC-130Js, thus necking down our aerial refueling force to a single T/M/S.

AH-1Z Viper/UH-1Y Venom (H-1 Upgrades)

The H-1 Upgrade Program, comprised of AH-1Z Viper and UH-1Y Venom aircraft, will significantly enhance the tactical capability, operational effectiveness and sustainability of our attack and utility helicopter fleet. Our Vietnam-era UH-1N's are reaching the end of their useful life, thus rapidly fielding the UH-1Y remains a top priority. The FY 2009 Budget requests \$3.8M in RDT&E and \$474.1M in APN for 20 AH-1Z/UH-1Y aircraft.

IOC for the UH-1Y will occur in 2008. The first operational deployment of UH-1Y is anticipated in the spring of 2009. IOC for the AH-1Z is FY 2011. Eleven production aircraft have been delivered to date and Operational Evaluation (OPEVAL) Phase II, which commenced in February 2008, is ongoing. A full rate production decision is expected in late FY 2008.

The current AH-1Z program of record is utilizing a remanufacturing strategy which requires an AH-1W be removed from operational status for a period of two years. To mitigate this shortfall we are adopting a "*build new*" strategy that will allow the AH-1Ws to remain in operational squadrons while we manufacture AH-1Zs. The intent is to revert back to a remanufacturing strategy once the operational shortfall has been mitigated. The FY 2007 Supplemental provided \$50M for Non-Recurring Engineering to pursue "*build new*" at a minimum of 50 AH-1Z aircraft.

CH-53K

In operation since 1981, the CH-53E is becoming increasingly expensive to operate. Its replacement, the CH-53K, will more than double existing lift capacity and range, while dramatically improving maintainability, reliability, and survivability, decreasing operating costs, and radically improving aircraft efficiency and operational effectiveness. The program passed Milestone B in December 2005 with a subsequent contract awarded to Sikorsky Aircraft Corporation in April 2006. IOC is scheduled for FY 2015. The program is proceeding through the developmental stages and will begin to procure airframes in the FY 2013. The FY 2009 Budget request is \$570.5M RDT&E to continue development through the Preliminary Design Review later this year and the Critical Design Review in FY 2009.

Unmanned Aerial Systems (UAS)

The Marine Corps is taking proactive steps to modernize and improve organic UAS capabilities. Our UAS are organized into three echelons, each tailored to the mission and

requirements of the supported command. Tier III UAS serve at the Marine Expeditionary Force (MEF) level; Tier II UAS support Regimental Combat Team and Marine Expeditionary Unit operations; and Tier I UAS support battalion and below operations. At the Tier III level, we have simultaneously transitioned Unmanned Aerial Vehicle Squadrons (VMU) to the RQ-7B Shadow and initiated a reorganization of the squadrons' force structure to better task-organize for mission requirements. The transition to the Shadow provides a temporary Tier III solution as a bridge from Pioneer to our expected Tier III IOC in 2015. As an interim solution, Shadow has been invaluable because it has enabled us to provide MAGTF Commanders with a far more responsive and reliable UAS than its predecessor, Pioneer. We have also begun the stand up of a third active component VMU squadron. The addition of a third VMU squadron is critical to sustaining current operations and will help in decreasing the operational tempo from our current deployment-to-dwell ratio of less than 1:1—to a more sustainable 1:2 ratio. This rapid transition and reorganization, initiated in January 2007, will be complete by the fourth quarter Fiscal Year 2009.

To best support our deployed forces, we have instituted an Intelligence, Surveillance and Reconnaissance (ISR) services contract to provide Scan Eagle systems to fill the Tier II void until future fielding of the Tier II/ Small Tactical UAS (STUAS) which will occur in 2011. At the Tier I level, the Marine Corps is transitioning from the Dragon Eye to the joint Raven-B program, which is also common with the U. S. Army. When fully fielded, our UAS family of systems will be networked through a robust and interoperable command and control system that provides commanders a significantly enhanced warfighting capability.

Aviation Command and Control Family of Systems (AC2FoS)

The Marine Aviation Command and Control System (MACCS) continues to contribute to the success of Marine aviation operations by planning and executing tactical air support while ensuring proper integration of aviation into the MAGTF scheme of maneuver. The future of Aviation Command and Control (AC2) is defined by a Family of Systems (FoS) designed to fuse real and near real-time data from sensors, weapons and C2 systems into a single integrated display. This fused data will be networked and distributed MAGTF-wide, increasing battle space awareness at all levels, from operators to commanders.

The centerpiece of the AC2FoS will be the Common Aviation Command and Control System (CAC2S) which replaces dissimilar legacy C2 equipment with a common, scalable suite. CAC2S will fuse the sensor inputs from expeditionary radars, as well as data from the F-35B and

UAS assets, vastly improving full spectrum surveillance and awareness. Our continued focus will ensure emerging systems are fully interoperable and designed to enhance our capabilities, while leveraging these systems to facilitate effective command functionality. Armed with fully networked systems, the MACCS will improve the ability to affect command, integrate resources, and employ Marine aviation most efficiently in support of MAGTF and Joint Force Commanders in the future.

VI. Conclusion

The Marine Corps has a heritage of fighting battles and winning wars on the ground, at sea and in the air. Since 2001, we have done so while supporting extremely high operational tempo, conducting combat operations, growing the force and introducing new aircraft and systems. My respect for the accomplishments of the men and women who comprise Marine aviation, past and present, is only exceeded by my confidence that we are poised to meet our future challenges. As we move forward we will execute the Marine Aviation Plan with a careful eye to maximizing efficiency gained early in each T/M/S transition. The resources Congress provides will continue to be used wisely in direct support of our most precious and important asset - the United States Marine. Thank you for your consideration.