



Defense official approves V-22 return to flight

Pete Aldridge, the undersecretary of defense for acquisition, technology and logistics, announced Dec. 21, 2001 at a press conference that the V-22 Osprey has been cleared to resume its flight test program in April—16 months after the Defense Department grounded the aircraft.

Mr. Aldridge indicated that the new program will be “event-driven” and much more “comprehensive than that previously planned.”

The tests, which will last about two years, will explore formation flying, combat maneuverability and shipboard compatibility, among other items.

Despite the technical concerns raised by two independent review teams, Aldridge realizes the need for the V-22.

“It is clear that we need to replace the aging CH-46 and CH-53D helicopters operated by the Marine Corps and Special Operations Forces,” he wrote in the Acquisition Decision Memorandum. “The V-22 is the only alternative that can meet the speed, range and survivability needs of our forces in a variety of challenging scenarios.”

CV-22 aircrews prepare for future action

With the letdown to 200 feet above sea level complete, the CV-22 air crew completes the coastal penetration checklist some 10 nm offshore. Flying at 230 knots ground speed, the CV-22 tiltrotor will be overland in less than three minutes. The pilot calls for terrain following radar active with an altitude of 200 feet above terrain selected and requests the electronic warfare equipment set to covert. The flight



The Osprey, which has been grounded since December 2000, will begin a comprehensive flight test program in April 2002.

Until tests are complete, production of the Osprey will be kept at a “minimum sustaining level” of about 11 aircraft per year. Nine MV-22s and two CV-22s are scheduled to be placed on contract this year.

engineer makes the execution checklist call as the Special Operations version of the Osprey crosses the coastline. The concentration in the cockpit intensifies as the specially equipped CV-22 begins its nighttime, TF/TA flight profile. Tonight’s mission for the aircraft and its crew is the insertion of a U.S. Navy SEAL Team 300 nm inland over hostile terrain. The marginal weather conditions that begin to envelope the aircraft will not hinder the mission. Instead, it will aid in the stealth required to make the mission a success.

Has the CV-22 been pressed into service in the War on Terrorism sooner than anticipated? Not quite, but for over four years now, a select group of operators from the Air Force Special Operations Command (AFSOC) has

Prior to the return to flight, Mr. Aldridge and the Secretary of the Navy Gordon England will conduct a review to assess the readiness of the aircraft and the program, followed by periodic reviews.

been flying missions like the one you just read in the Simulation Lab at Bell Helicopter in Ft. Worth, refining the tactics and procedures that will be used when the CV-22 is deployed into the field.

Led by Lt. Col. Don Larson of the 18th Flight Test Squadron at Hurlburt Field AFB, AFSOC aircrews have made significant progress towards their core objective of maximizing the combat effectiveness of the CV-22 platform. With over 1,000 hours flown, a great deal of ground has been covered. This includes checklist development, cockpit resource management and cockpit crew integration, as well as tactical employment concepts to maximize the operational benefits of the aircraft’s many mis-



PM Perspective: Osprey takes step in right direction

By Mike Tkach
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Pen-tagon acquisition chief Pete Aldridge's recent approval to continue the Osprey's flight test program is one of the most important developments for the V-22 program since the Defense Department grounded the fleet following the December 2000 accident.

Now it's up to Bell, Boeing and the customer to implement a flight test program that fleshes out the flight envelope, re-validates the aircraft's operational capabilities and addresses the design concerns and aeromechanic phenomena raised by the V-22 Blue Ribbon Panel.

The good news is that we've already incorporated several of the panel's recommendations, including changes to the engine nacelle, flight control software and hydraulics systems. We plan to demonstrate—through a rigorous flight test program—the technical improvements that have been made.

Our work, however, is far from complete. It'll be challenging to meet the high expectations of the customer, the Defense Department and the taxpayers. I'm confident that our renewed commitment to operational excellence will help us achieve all of our goals.

We plan to resume the flight test program this April and conduct extensive testing until the aircraft is ready to return to the operational units. The next phase of the flight test program will allow us to address all of the significant concerns raised by the review panel, including vortex ring state, or settling with power.

Everyone must remember that—at the direction of USMC Commandant James L. Jones—the V-22 program is driven by events and safety, not timelines and rigid schedules. We will be methodical and return to flight only when the aircraft is ready.

Admittedly, it is difficult to upgrade the aircraft without incorporating some kind of schedule. We've chosen to use a three-stage, "block upgrade" approach to address mechanical and supportability concerns.

The Block 'A' upgrade, which focuses on safety improvements, is already well underway. Block 'A' Ospreys will include redesigned engine nacelles, improved interactive technical manuals and software and lighting improvements.

Aircraft being built now by the Bell-Boeing team are not Block 'A' models and must be retrofitted to the proper configuration at a later date. Block 'B' changes will focus on the Osprey's reliability and maintainability, while Block 'C' will provide mis-

sion enhancements.

The importance of Mr. Aldridge's announcement is matched only by the enthusiasm of our pilots and maintainers who want to get the birds back in the air. The unwavering support from the men and women who maintain and operate the aircraft has been well documented. In fact, their zeal for the Osprey indirectly impacted the results of the NASA-led review (*see Nov/Dec Osprey Facts*) conducted this fall and the opinions of high-ranking government officials.

During a House Armed Services readiness subcommittee field hearing in May, several V-22 maintainers spoke ardently on behalf of the Osprey and explained the importance of the aircraft's potential to the armed services and the people and freedoms they defend.

At the same readiness hearings Maj. Karston Henkel, squadron assistant operations officer and a fully qualified V-22 aircraft commander at VMMA-204, said it best. "This is a phenomenal aircraft. If I could take reporters for a ride in the V-22, they would return and want to write a 50-page article about how amazing it is. It's that good. We just want to move forward."

We are going to do just that.

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sion systems. Beneficial yields extend beyond the core work as well.

The CV-22 tactics program has evolved into a powerful asset and is now routinely employed by the overall program to address engineering issues and challenges, provide inputs and guidance on program priorities, and analyze and recommend tradeoffs that optimize operational suitability in light of the realities of budgetary constraints. This program employs a creative engineering approach to improve the crew and aircraft capability while reducing implementation costs by millions of dollars.

This CV-22 tactics capability will also be employed as the V-22 Program Office continues to define the "Way Forward" for the CV-22. For the future, the tactics team will work closely with the program office to help establish the way forward priorities as well as Block Upgrade program plans.

Optimizing mission performance, resolving engineering issues and cost avoidance triumphs have all contributed to the success of the CV-22 Tactics program. Now serving as a mainstay for the overall CV-22 program, this effort will ensure a smooth and successful transition of the CV-22 to the operational world.

Nat'l Guard considers V-22 for Homeland Defense missions

By Gidge Dady
NAVAIR V-22 Public Affairs

As the U.S. government considers long term plans for homeland security, the Air National Guard is looking at how it would employ the CV-22 Osprey in support of its homeland defense missions. The State Adjutant General from Minnesota, Maj. Gen. Eugene Andreotti, recently visited the V-22 Joint Program Office to discuss potential procurement of the Air Force variant, the CV-22, and explore future possibilities of using it for statewide civil support roles and missions.

With a restructured program and scheduled return to flight testing in April 2002, National Guard officials say they are interested and confident in tiltrotor technology and are considering long range plans, which may include an option to buy the CV-22 tiltrotor aircraft.

In a peacetime role, the National Guard would use the CV-22 to respond to statewide civil situations that require protection of life and property. During wartime, the CV-22 could then be used to augment the Air Force Special Operations Command and Air Combat Command in carrying out a federal mission, such as in Desert Storm.

"We think the V-22 is going to be around for many years. It's a new idea, a new concept, relevant in various area and contingencies, and we feel we would be able to operate this aircraft with crew ratios that will be required," said Andreotti. "We have quite a few units in the Air National Guard and this air-



Photo by Maj. Randy Teufel

Staff Sgt. Ollie Oliverio (right), V-22 developmental test crewchief, explains the hoist system and related tests to Maj. Gen. Eugene Andreotti, adjutant general, Minnesota National Guard, as they tour the Osprey's cabin during a recent visit to the V-22 test facility located at the Naval Air Warfare Center, Aircraft Division, Patuxent River, Md.

craft would be valuable in our search and rescue (SAR) responsibilities. In addition to the SAR mission, many of the states will be fielding weapons of mass destruction (WMD) Civil Support Teams. This is an ideal aircraft to support the quick response required of these teams."

Andreotti added that because the V-22 does not require an airport, just an open area to land, it becomes accessible and relevant to state and community missions.

Guard officials say that potential scenarios in which the CV-22 could be employed might involve terrorists dispensing biological or chemical agents in the air filtration systems of a heavily populated area such as a major shopping mall. In this scenario, a CV-22 could quickly transport a Civil Support Team to the site and land them in an open area, such as a parking lot.

The CV-22's quick response time would allow this team to begin their damage assessment much sooner than would be possible with other available modes of transportation. Another statewide use of this platform is for search and rescue because the CV-22 can fly twice as fast as conventional helicopters, has a greater range, and can loiter and search an extended geographical location for longer periods of time without refueling.

Some of these homeland defense missions, in addition to SAR and Civil Support Teams, may extend into disaster relief, counter-drug operations, reconnaissance/surveillance and security force transport.

The V-22, which can take off like a helicopter and then rotate its rotors and fly like an airplane entered low rate initial production in 1999. The program had approached a major milestone decision to enter full rate production when a MV-22 suffered a fatal accident during a routine training mission in December 2000. Since that time, two important



Photo by LtCol Ron Culp

The Air National Guard hopes to utilize the V-22 Osprey for multiple homeland defense missions, including search and rescue, civil support, disaster relief, counter-drug operations, reconnaissance/surveillance and security force transport.



**THE RULES OF WAR HAVE CHANGED.
SO HAVE THE RULES OF FLIGHT.**

As American armed forces transform to respond to an ever-changing world, the V-22 Osprey will be a vital asset. For combat assault and special ops insertion and extraction, it is unparalleled in speed, range and survivability. Plus, it offers the unmatched flexibility of tiltrotor technology. *Now is the time. This is the aircraft.*

TRANSFORMING HOW WE FIGHT. AND WIN.  Team Osprey

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V-22 team launches new ad

The Bell Boeing Tiltrotor Team recently launched a new advertising campaign that highlights the aircraft's operational flexibility, its transformational technology and its potential role in a dynamic world.

The new advertisement—designed by Temerlin McClain of Dallas, Texas—marks the long-awaited return of V-22 advertising. The Osprey government and industry team pulled all of its advertising following the Dec. 11, 2000 mishap near Jacksonville, N.C.

The first in a series of advertisements is a

successful combination of simple design and powerful messages that will help re-engage public interest in the tiltrotor as the program presses on to return to flight this April.

The full-page advertisement can be seen in several industry publications, including *Good Sense*, *Armed Forces Journal*, *Aviation Week*, *Defense News*, *Marine Corps Gazette*, *Marine Corps Times* and *Air Force Times*.

Future advertisements will feature other characteristics and capabilities of the V-22.

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independent reviews conducted by a Department of Defense Blue Ribbon Panel and NASA Ames Research Center have assessed the safety of the aircraft and the maturity of the technology to carry out the missions of the user services. Both reviews have recommended that the program move forward with specific engineering changes and improvements that will result in a safer and more operationally capable aircraft for fleet use.

Specifically relating to the Air National Guard is a study by Arrowpoint Corporation which is nearing completion of a V-22 mission capabilities assessment. Early findings show that of a possible 44 traditional and new National Guard missions considered, which include state, local and federal support and warfighting operations, the V-22's capabilities could be considered for 21 of those missions.

Some of the new areas of support that the study found would be a V-22 fit include counter-terrorism and unconventional operations. The study revealed that the "V-22 would significantly enhance National Guard mission performance or provide a new capability."

The V-22 is the first production tiltrotor in existence. By combining the hovering characteristics of a helicopter with the speed, range and fuel efficiency of a turboprop airplane, the V-22 can meet multi-service, multi-mission requirements. The V-22's leap ahead technology will provide the Marine Corps and the Air Force with unprecedented capability flexible enough to permit responsive action in a very uncertain world.

The V-22 is scheduled to return to the skies in April 2002 when the Marine variant MV-22 test aircraft, located at the Naval Air Warfare Center, Aircraft Division, Patuxent River, Md., will be used to validate the engineering changes and further expand the flight envelope.

A month later, the Air Force is expected to resume flight testing for the CV-22, located at Edwards Air Force Base.

"Now that we have an approved way ahead plan, we will return to flight with a methodical and event-driven flight test program that will deliver an aircraft to the fleet that is safer and more capable than ever before," said Col. Dan Schultz, V-22 program manager.