

## VH-92A Presidential Helicopter Fleet Replacement Program

### Executive Summary

- The VH-92A program is progressing on schedule with excellent teamwork and open communication among all agencies involved.
- The Navy has modified two Sikorsky S-92A helicopters to produce two VH-92A Engineering Development Model (EDM) aircraft. The first aircraft has entered government-led integrated testing at Naval Air Station Patuxent River, Maryland, with the second to follow in December 2018.
- This effort includes the integration of the Mission Communications System (MCS) designed by Naval Air Systems Command (NAVAIR) at St. Inigoes, Maryland. MCS software development is progressing on schedule.
- The Navy started integrated flight testing at Patuxent River in August 2018. It will be followed by an operational assessment (OA) planned for 2QFY19 to support a Milestone C decision in 3QFY19. Preparations for the OA are on schedule; DOT&E approved the OA test plan on June 21, 2018.
- The program is making changes to the MCS design due to a late change in security protocols levied by the Defense Information Systems Agency (DISA) after the MCS design was finalized. The program is pursuing several solutions in parallel with a short-term workaround in place.
- In FY18, the VH-92 program completed live fire testing in accordance with DOT&E-approved test plans. Data analysis is ongoing and will be finalized in FY19.

### System

- The VH-92A is a dual-piloted, twin-engine helicopter based on the Sikorsky S-92A. The program will maintain the VH-92A Federal Aviation Administration (FAA) airworthiness certification throughout its lifecycle.
- The VH-92A aircraft will replace the current Marine Corps fleet of VH-3D and VH-60N helicopters flown by Marine Helicopter Squadron One (HMX-1) to perform the presidential airlift mission.
- The VH-92A is capable of operating worldwide in day, night, or adverse weather conditions. The VH-92A will be



air-transportable to remote locations via a single Air Force C-17 cargo aircraft.

- The government-designed MCS will provide the ability to conduct simultaneous short- and long-range secure and non-secure voice and data communications. The MCS will provide situational awareness by exchanging information with outside agencies, organizations, and supporting aircraft. The MCS hardware will be installed into the VH-92A at Sikorsky Aircraft in Stratford, Connecticut. Software will then be loaded and checked out by Lockheed Martin in Owego, New York.
- Final interior finishing and aircraft painting will be done at Owego to complete the VH-92A for delivery.

### Mission

- The VH-92A aircraft will enable HMX-1 to provide safe and timely transport of the President of the United States and other parties as directed by the White House Military Office.
- The VH-92A shall operate from commercial airports, military airfields, Navy ships, and austere sites throughout the world.

### Major Contractor

Sikorsky Aircraft, a Lockheed Martin subsidiary company – Stratford, Connecticut

### Activity

- EDM 1 achieved its first flight at the Sikorsky facility in Stratford, Connecticut, on July 28, 2017. After modifications at the Lockheed Martin facility at Owego, New York, it arrived at Patuxent River on August 2, 2018, to begin government-led, integrated developmental/operational testing.
- EDM-2 is in contractor testing at Owego after achieving its first flight at Stratford on November 16, 2017, and modifications at Owego. It is expected to deliver to Patuxent River in December 2018 to join the test program.

# FY18 NAVY PROGRAMS

- NAVAIR at St. Inigoes, Maryland, is continuing development of the MCS software. Systems integration laboratories, which replicate the MCS for development, test, and training, are operational and MCS software development is on schedule.
- Sikorsky installed the MCS hardware as part of the VH-92A modifications and Lockheed Martin installed early builds of the MCS software into the EDMs at Owego.
- On September 22, 2018, aircrew from the HMX-1 VH-92A Operational Test Team conducted 14 landings on the White House South Lawn. HMX-1 will use observations from these landings to inform the OA in March 2019.
- The Navy has begun the first phase of integrated developmental/operational testing for 150 flight hours at Patuxent River, Maryland. The testing will include loading a VH-92A onto a C-17 to simulate a long-distance deployment.
- The program is preparing for the VH-92A OA, which is forecast to begin in 2QFY19 to support a Milestone C decision in 3QFY19. It includes HMX-1 aircrews, and 30 flight hours over 30 days utilizing two VH-92A EDM aircraft. This assessment will exercise all Presidential airlift missions at actual mission sites with personnel participating from all agencies that support the White House. The OA has planned scenarios that include both VH-92A cabin configurations. DOT&E approved the OA test plan on June 21, 2018.
- Due to a change in security protocols after the MCS design was finalized, the program is making changes to the MCS that

will enable it to connect to the Crisis Management System (CMS). A near-term workaround is in place to support the OA, and a permanent solution is in work.

- In FY18, the VH-92 program completed the planned live fire testing in accordance with DOT&E-approved test plans.

## Assessment

- The program is on track to meet program milestones. Maintenance of FAA airworthiness certification is a key emphasis area.
- The program is working to resolve a risk to meeting the Net Ready Key Performance Parameter for the MCS to connect to the CMS. Security protocol changes enacted after MCS design finalization have required development of a near-term solution to support the OA in parallel with a permanent solution to support the IOT&E.
- Live fire test data analysis is ongoing and the vulnerability evaluation of the VH-92A against operationally realistic threats is expected to be completed in FY19.

## Recommendation

1. The program should continue current efforts to develop and implement solutions to enable connection to the CMS.