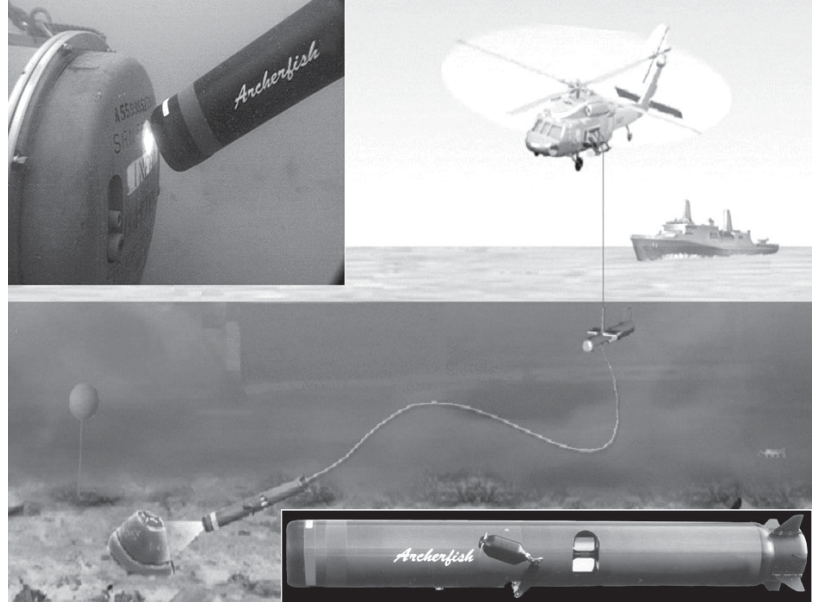


Airborne Mine Neutralization System (AMNS)

SUMMARY

- A Quick Reaction Assessment (QRA) of the MH-53E Airborne Mine Neutralization System (AMNS) recommended the system for limited contingency deployment after the correction of training and documentation deficiencies.
- The MH-53E AMNS program concluded with the delivery of seven systems and 70 neutralizers.
- The Critical Design Review of MH-60S AMNS is complete.



The AMNS is a helicopter-deployed mine countermeasure system that provides rapid neutralization of mines at sea.

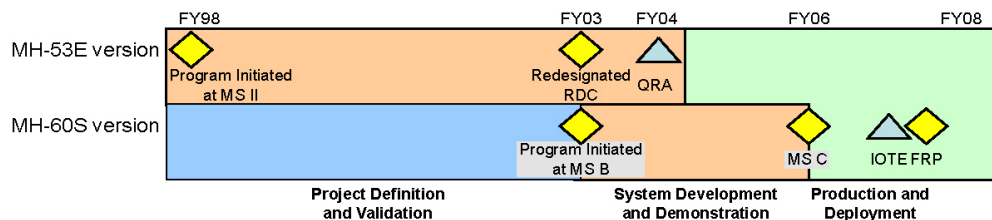
SYSTEM DESCRIPTION AND MISSION

The AMNS is a helicopter-deployed mine countermeasure system that provides rapid neutralization of mines at sea. The Navy is acquiring two separate and distinct AMNS systems: one for the MH-53E helicopter and one for the MH-60S helicopter.

Different contractors are developing the two systems. AMNS provides an organic mine countermeasure capability for aircraft carriers, large amphibious ships, and the Littoral Combat Ship. The system must be able to relocate, identify, and neutralize mines directly from the helicopter.

The location of a suspected mine (obtained from other sources) is entered into the system prior to take-off or while en route to the area of operations. Upon arrival, the aircraft hovers at a safe distance from the target position, and lowers an expendable, self-propelled neutralizer into the water. The neutralizer is either operator driven or travels autonomously to the reported target position and searches for the mine. A fiber optic cable relays information between the operator in the helicopter and the neutralizer. Once the operator relocates the target and identifies it as a mine, he positions the expendable neutralizer to detonate its shaped charge into the mine. The neutralizer disables the mine by rupturing its case or causing detonation of the mine charge. Each system comes with a reusable training neutralizer. An aircraft can carry up to four neutralizers. The MH-53E system is a modified version of a system built for German Navy mine countermeasures ships. It uses the Seafox neutralizer. The MH-60S system will use the British Archerfish neutralizer.

TEST AND EVALUATION ACTIVITY



- DOT&E representatives participated in the development of the Test and Evaluation Master Plan for the MH-60S system.
- The program office and contractor held the MH-60S system Critical Design Review in Q3FY04.

NAVY PROGRAMS

- The Navy's Operational Test and Evaluation Force conducted the MH-53E system's QRA in April 2004. The incorporated hardware changes of the tested system intended to address component obsolescence, water-tightness, and some of the performance issues noted during developmental testing.

TEST AND EVALUATION ASSESSMENT

The AMNS has an approved Operational Requirements Document, but the document is out of date and needs revision prior to the start of MH-60S system operational testing. We approved the MH-60S system's Test and Evaluation Master Plan in February 2004.

The MH-53E system had trouble meeting some performance requirements during early testing, so the program sponsor reduced the minimum performance requirements in an Operational Requirements Document clarification letter on January 27, 2003. The changes were due to a compelling fleet need to field the system and the cost/benefit of further system improvements. The Assistant Secretary of the Navy (Research, Development, and Acquisition) (ASN(RDA)) designated the MH-53E system a Rapid Deployment Capability in April 2003. This terminated the Acquisition Category II program and bypassed the planned operational testing outlined in the approved Test and Evaluation Master Plan and Operational Requirements Document. ASN(RDA) approved the production of seven MH-53E systems and 70 neutralizers and directed the conduct of an abbreviated operational test known as a QRA to evaluate the system. The QRA took the place of a full operational evaluation. The Navy plans no additional MH-53E system procurements, so this is our final report on that system.

The MH-53E system was lethal against threat mines comparable to the U.S. Mark 6 and Mark 56 moored mines when detonated in the correct firing position. However, it did not achieve required performance thresholds for probability of neutralization, neutralizer reliability, and high-current operations during developmental testing. During the QRA, the system met lowered requirements for probability of neutralization and neutralizer reliability, but did not meet the requirement for neutralizer availability. The QRA didn't evaluate high current operation and didn't demonstrate satisfactory operation at the threshold depth. Based on the QRA results, the Navy Operational Test Agency recommended the MH-53E system for limited contingency deployment after correction of training and documentation issues. The MH-53E system wasn't adequately tested and we expect it to have suitability issues if deployed.

The MH-60S system is still in development and hasn't had any operational or dedicated live fire testing. Initial contractor and developmental testing will occur in FY05. Future testing will provide data to evaluate the capability of the MH-60S design and evaluate the likelihood of correct neutralizer placement and detonation.