

# Knifefish UUV Enters Low-Rate Initial Production



A crane is used aboard the USNS Spearhead to transport a Knifefish UUV, which will now enter low-rate initial production. U.S. Navy/Mass Communication Specialist 2nd Class Anderson W. Branch

ARLINGTON, Va. – The Navy has awarded a contract to begin low-rate initial production (LRIP) for the Knifefish Surface Mine Countermeasure Unmanned Undersea Vehicle (UUV), a key mission module for the littoral combat ship's Mine Countermeasures Mission Package.

Naval Sea Systems Command awarded on Aug. 26 a \$44.6 million contract modification to Knifefish prime contractor General Dynamics Mission Systems for LRIP of the UUV. The contract will fund the initial deliveries of the Knifefish that will be used to provide the “initial systems for the Navy to test and operate,” the Defense Department release said.

Earlier on the date of the contract announcement, the Program Executive Officer for Unmanned and Small Combatants (PEO USC) announced that it had granted Milestone C approval to the Knifefish program, which cleared the way for LRIP.

“The Knifefish system is designed for deployment from the littoral combat ship (LCS), vessels of opportunity or from shore to detect and classify buried, bottom and volume mines in high-clutter environments,” the PEO USC release said. “Knifefish is a critical element of the LCS Mine Countermeasure Mission Package and will reduce risk to Navy personnel and equipment.

The following are excerpts from the PEO USC release:

“The Knifefish system, which consists of two unmanned undersea

vehicles along with support systems and equipment, uses cutting-edge low-frequency broadband sonar and automated target recognition software technology developed by the Naval Research Laboratory and successfully transitioned to industry. It acts as an off-board sensor while the host ship stays outside the mine field boundaries.



Members of a Knifefish test team man tending lines during crane operations as part of an operational test of the UUV, which is designed to deploy off littoral combat ships. U.S. Navy/Mass Communication Specialist 1st Class Brian M. Brooks “Knifefish’s common open systems architecture design and modularity allow for platform flexibility and quick reconfiguration of the mission package to respond to evolving and dynamic mission requirements. Planned block upgrades will improve its sensors and automated target recognition software to keep pace with mine threats.

“Formal developmental testing and an operational assessment were conducted from January through May 2019 in multiple locations off the coasts of Massachusetts and Florida. The Knifefish tests involved end-to-end operational mine-hunting missions against a deployed, simulated target field.

Operations performed by fleet Sailors during developmental testing and operational assessment included mission planning, launching and recovering the system, monitoring the sorties and processing data. The unmanned undersea vehicles were deployed from a support craft in the vessels of opportunity configuration for all test events to provide a characterization of the performance of the entire Knifefish system, including the launch and recovery subsystem.

“A full-rate production decision is expected in fiscal year

2022 after additional testing of LRIP systems. The Navy plans to procure 30 Knifefish systems in all, 24 in support of LCS Mine Countermeasure Mission Packages and an additional six for deployment from vessels of opportunity.”