Naval Supply Systems Command introduces Naval Sustainment System- Supply 2.0

The guided-missile destroyer USS Arleigh Burke (DDG 51) transits through the Mediterranean Sea in 2023. NSS-Supply is helping meet fleet readiness goals using an agile framework driven by data analytics. CREDIT: U.S. Navy | Mass Communication Specialist 2nd Class Omar Rubi

By Kirk Engler and Melissa Olson

Naval Sustainment System-Supply (NSS-Supply) 2.0 is focused on delivering fleet outcomes and supply's contribution to fleet readiness, whereas NSS-Supply's original focus was to capture supply chain value.

Navy fleet readiness goals fall into three categories: Subsurface, Surface, and Aviation, allowing NAVSUP to focus on supply's contribution to meeting fleet readiness goals.

How? NSS-Supply uses the “Agile” framework driven by data analytics. NSS-Supply is currently analyzing data to see what supplies are keeping the Surface Warfare community from reaching their North Star readiness target of 75 mission capable ships. A good example is the targeting of on-board sparing for systems that have outdated spares modeling. Getting the right mix of spares on board increases readiness and improves endurance.

Simply stated, NSS-Supply 2.0 moves away from a monetized-value calculation to a readiness calculation directly linked to fleet readiness goals.

NSS-Supply is built on the CNO’s priorities of warfighting, warfighters, and the foundation that supports them. The essential element is the Agile approach which quickly assesses problem areas and rapidly deploys innovation into the E2E supply chain using the Get Real, Get Better mindset to deep-dive supply chain issues that accelerate the Navy’s warfighting advantage.

Initiatives are built from the Chief of Naval Operations, Navigation Plan Implementation Framework (NIF) priorities and objectives. Additionally, Performance-to-Plan (P2P) is inculcated in the NSS-Supply culture to drive baseline Get Real readiness performance and NSS-Supply is the Get Better engine that allows accountable commanders to implement world-class readiness solutions across the Navy’s E2E supply chain.

NSS-Supply has undertaken 33 initiatives since 2021. The following examples provide a few highlights:

- Achieved average RTAT reduction of 40% in aviation and 30% in maritime repairs.
- Established first Regional Maintenance Center reoccurring repair agreements to repair 104 parts for wholesale stocking.

- Increased nuclear submarine capabilities through improved spares pool health and enhanced policies to increase critical submarine parts inventories.
- Engaged key suppliers to improve contract performance, expanded contract strategies, and improved inventory performance.
- Built and implemented E2E Naval Shipyard Supply Chain Management tool to significantly improve submarine material support.

NSS-Supply continues to tackle supply chain initiatives directly supporting the warfighter as a multi-year journey to transform the end-to-end supply chain and provide the sustainment outcome the fleet needs that responds to the VCNO directive that designated the Commander, Naval Supply Systems Command as the Navy's E2E Navy Supply Chain Integrator.

CDR Kirk Engler is director of Naval Sustainment System – Supply, Naval Supply Systems Command and Melissa Olson is deputy director.

L3Harris Moves Ahead with Disruptive Capabilities

L3Harris successfully launched a recovered a Iver4 UUV from a submarine. Photo Credit: L3Harris

L3Harris (Booth 1037) hopes to use its expertise in autonomy software, uncrewed surface vessels and uncrewed underwater systems to help the Navy counter the looming threat of China and get more systems into service.

The company has a lot of interest in what Jon Rambeau, president of L3Harris' Integrated Mission Systems segment, called "disruptive capabilities," which includes moving airborne ISR capabilities from military aircraft to business jets and focusing on passive sensing and targeting for autonomous surface and subsurface vehicles.

"In the maritime domain … [we do] a lot of work around autonomous surface and subsurface vessels, and also a focus on passive sensing and targeting for the surface to allow the manned fleet to operate without having to light up their radars so often," Rambeau told Seapower in an interview. "We think that's a capability that can be deployed very rapidly, it's very mature and it's also very low cost."

The company also recently successfully deployed and recovered an uncrewed underwater vessel from a submarine's torpedo tube,

using one of its Iver4 vehicles.

“We were the first company to be able to demonstrate the capability to retrieve a UUV through a submarine torpedo tube while it was underway,” Rambeau said. “A pretty big accomplishment. Others had tried and failed and we were able to be successful on our first try, which was pretty impressive and not only that, but twice in one day, so pretty neat. That team just won our corporation’s top technology innovation award this year across the entire company.”

Replicator

The U.S. Department of Defense last year announced the Replicator program, a still largely undefined effort to launch thousands of attritable, autonomous aerial and surface systems to help counter China’s growing fleet.

“That’s something we’re very interested in being a part of,” Rambeau said. “I think some of those decisions are still being made about who and how we’ll participate, but we know there’s an initiative, obviously, to drive the large-scale deployment of unmanned systems, and we think the work we do is right in the heart of that. We’ve deployed hundreds of small, undersea vessels, we’ve deployed hundreds of small surface vessels over a number of years, some in the commercial side, some in the military side of our business, and that’s where a lot of our concentration has been, small and medium vessels for subsurface and surface operations, and a lot of work particularly around the autonomy capability.”

L3Harris has an in-house autonomy development team, a capability Rambeau said is very mature, and had two autonomous ships deployed under an urgent operational needs statement with Task Force 59 out of Bahrain, which has been demonstrating uncrewed surface vessel capabilities. The submarine-launched UUV effort also stemmed from an urgent needs requirement.

“One of the areas that we continue to focus on is that we know the customer pull is there for these, I would say disruptive capabilities, we have the technology well matured,” Rambeau said. “I think the question is, how do we quickly get from proof of concept to prototyping to production as fast as possible? Initiatives like Replicator are designed to try to move that along, and we’re hopeful that there will be opportunities for us to be part of that.”

Passive Sensing

Some of the passive sensing and targeting capabilities the company has developed for uncrewed systems can also be deployed on manned vessels, and L3Harris is planning to do some prototyping work with the Navy on that later this year.

“We’re still working through the details of how and where and when that will take place,” Rambeau said, “but we are looking to prove out the ability to sense and target an adversary without having to use a radar onboard a ship at all. That is our hope.”

Rambeau said he is seeing growing interest from the military in manned-unmanned teaming, a concept that has been around for years but which could gain new potency under a Replicator-type effort.

“I won’t speak for the Navy, but from my point of view I think that being able to link a small group of unmanned surface vessels with the manned fleet and allow those to be companions to get out ahead a little bit, do some reconnaissance, feed information back, there certainly are a lot of opportunities to employ the vessels in that way,” he said.

“… With the ability now to launch and recover an unmanned vessel from a submarine, that really gives an opportunity to extend the reach of the submarine fleet and also to provide greater survivability, because they may not have to go into harm’s way as deeply to gather data if they have an appendage

that can be set free and then recovered back with some information. Minehunting, that sort of thing."

U.S. 4th Fleet Announces Southern Seas 2024 Deployment

ATLANTIC OCEAN (Feb. 26, 2024) The Arleigh Burke-class guided-missile destroyer USS Porter (DDG 78) conducts a replenishment-at-sea with the Nimitz-class aircraft carrier USS George Washington (CVN 73) while underway in the Atlantic Ocean, Feb. 26, 2024. (USN photo by MC2 Nicholas A. Russell)
From U.S. 4th Fleet, 5 April 2024

MAYPORT, Fla. - The U.S. Navy aircraft carrier USS George Washington (CVN 73) will deploy to the U.S. Southern Command area of operations over the next few months as part of U.S.

Naval Forces Southern Command/U.S. 4th Fleet's Southern Seas 2024 deployment.

George Washington, Arleigh Burke-class guided-missile destroyer, USS Porter (DDG 78), and Henry J. Kaiser-class replenishment oiler USNS John Lenthall (T-AO-189) are scheduled to conduct passing exercises and operations at sea with partner nation maritime forces as the ships circumnavigate the continent of South America. Southern Seas 2024 will feature subject matter expert exchanges and provide the opportunity for distinguished visitors from partner nations to see aircraft carrier operations up close. Engagements are planned with Argentina, Brazil, Chile, Colombia, Ecuador, Peru, and Uruguay, with port visits planned for Brazil, Chile, and Peru.

"Southern Seas 2024 will provide the opportunity to improve interoperability and increase proficiency with partner nation maritime forces," said Rear Adm. Jim Aiken, Commander U.S. Naval Forces Southern Command/U.S. 4th Fleet. "Deployments like Southern Seas strengthen maritime partnerships and build trust with our partners in the region."

"We look forward to building readiness and advancing training as we engage with our friends and partners in South America," said Rear Adm. Robert Westendorff, Commander, Carrier Strike Group 10. "We also look forward to visiting several spectacular locations in South America, as U.S. Navy Sailors don't often get to see this part of the world."

New for Southern Seas 2024, an embarked international staff of approximately two dozen officers from 11 partner nations will serve aboard USS George Washington. This international staff will receive instruction from U.S. Naval War College professors and will work alongside embarked Destroyer Squadron 40 personnel to conduct detailed operational planning in support of operations at sea. Countries planning to participate in this embarked international staff include

Argentina, Brazil, Canada, Chile, Colombia, Ecuador, the Netherlands, Paraguay, Peru, Trinidad and Tobago, United Kingdom, and the United States.

Southern Seas 2024 marks the 10th mission to the region since 2007 and the third time involving USS George Washington. The aircraft carrier also conducted Southern Seas 2008 and Southern Seas 2015. Like the previous deployments, Southern Seas 2024 will foster goodwill, strengthen maritime partnerships, counter threats, and build our team.

Aircraft carrier USS George Washington is one of the centerpieces of America's Naval forces – the most adaptable and survivable airfields in the world. On any given day, Sailors aboard an aircraft carrier and its air wing come to the fight trained and equipped across a full range of missions. They are ready to control the sea, conduct strikes, and maneuver across the electromagnetic spectrum and cyberspace. No other naval force fields a commensurate range and depth of combat capabilities.

April 4 Red Sea Update

U.S. Central Command, April 4, 2024

TAMPA, Fla. – At approximately 2:20 p.m. (Sanaa time) on April 4, U.S. Central Command (CENTCOM) forces successfully engaged and destroyed one anti-ship missile (ASM) in a Houthi controlled territory of Yemen. There were no injuries or damage reported by U.S., coalition, or commercial ships.

It was determined that the missile presented a threat to U.S. and coalition forces and merchant vessels in the region. CENTCOM is dedicated to protecting the freedom of navigation

and making international waters safer and more secure for Coalition and merchant vessels.

Metal Shark Set to Debut Autonomous, Amphibious, Semi-Submersible “Prowler” Military Interceptor and “Frenzy” Micro-USV

JEANERETTE, La. – *April 4th, 2024:* Louisiana-based boat builder Metal Shark has announced the debut of “Prowler,” a versatile military craft combining multiple unique technologies to meet the current and near future warfighting requirements of the US military and its allies. The company is also debuting “Frenzy,” a high-performance, low-cost,

amphibious micro-USV with a payload carrying capacity of up to 14 lbs.

Merging autonomous, amphibious, and semi-submersible capabilities with the performance and seakeeping characteristics of a slender deep-vee monohull surface craft, Prowler has been designed to address operational challenges identified by the United States Navy and Marine Corps, two key Metal Shark clients.

“Prowler represents the sum total of everything we’ve learned while building 400-plus autonomous and remote operated vessels for our military customers over the past decade,” said Metal Shark CEO Chris Allard. “Every aspect of Prowler’s intended operation draws from proven technology. Prowler delivers massive increases in lethality and versatility, merging multiple capabilities into a compact, flexible, lower-cost platform ready for volume production.”

Fully amphibious and capable of autonomous or remote operation on land or at sea, Prowler offers drastically simplified launch and recovery compared to traditional vessels. Prowler is capable of self-launch and self-recovery at boat ramps, without a prime mover or trailer, or from the well deck of an amphibious ship, with no need for cumbersome cradles or dollies. Prowler’s low-speed crawl enables autonomous or remote operation on land, allowing vessels to be staged and maneuvered with minimal effort.

Prowler operates on land via a proprietary electric-drive system developed by Metal Shark, which uses low-pressure, high-traction tires mated to dedicated motors for propulsion and steering. Hydraulic rams raise and lower front and rear wheels for operation on land or at sea. Rear wheels are equipped with OTR-certified tires and marine brakes, and Prowler features DOT-compliant lighting. This allows Prowler to be transported over the road behind a conventional prime mover with no trailer, greatly simplifying logistics for

operators.

Propelled by a 300-horsepower Volvo Penta D6 Aquamatic inboard diesel engine and stern drive, the 30-foot, welded-aluminum Prowler operates as a typical surface vessel while underway, with a deep-vee planing hull delivering a 35-knot sprint speed and 500 nautical mile range.

Designed for extended loitering in a semi-submerged state, Prowler's large integrated ballast tanks flood when the vessel is static. In loitering mode, Prowler's decks are near the waterline, with only the vessel's arch-style communications mast visible above the water. Semi-submersion reduces Prowler's operational profile while also improving stability for sensors, surveillance and weapons systems.

Prowler's mast carries an array of communications equipment and a situational awareness ensemble for autonomous or remote operation, and can be equipped with port and starboard launch tubes for the deployment of loitering smart drones or other weapons. The mast also serves as the air intake for Prowler's diesel engine. A lithium-ion battery or optional generator power pack supports station keeping, surveillance, guidance, and communications systems during extended loitering periods of up to a week.

The lift from Prowler's planing hull design allows the vessel to quickly climb to the surface from its submerged state to resume normal operation once the surveillance mission concludes.

Prowler is equipped with a computer networked system able to support a multitude of UMAA-compliant command and control, autonomy, targeting, and AI software packages. Prowler's system architecture provides the forward flexibility to accommodate third party software and/or hardware upgrades to support collaborative intercept capability or other technologies as they may be required.

Prowler’s computer system, along with propulsion, mechanical, and electrical systems are contained within a single removable module to allow for expedited onsite servicing, repair, upgrade, or replacement with no need to transport the vessel.

Prowler can simultaneously carry multiple payloads, with 1,000 lbs. of total payload carrying capacity. In addition to the aforementioned smart loitering drones, Prowler can carry up to twelve “Frenzy” amphibious micro USVs, which are carried on deck and self-launched on their own wheels via Prowler’s stern ramp. Designed and built by Metal Shark, the Frenzy features electric waterjet propulsion, carries a payload of up to 14 lbs., and, like Prowler, can loiter in a semi-submerged state.

“I’ve been toying with the notion of this little gizmo ever since we began designing the Long Range Unmanned Surface Vessel (LRUSV) for the Marine Corps,” said Mr. Allard, speaking of the Frenzy micro USV. “There’s a huge need for attritable USVs in a compact form factor, and very few sources. Frenzy will serve this demand, and putting Frenzy onboard Prowler makes perfect sense. Pairing an over-the-horizon capable USV with micro-USVs delivers a one-two punch capability, keeping the key asset safe while allowing the attritable drones to do their job, all while being watched from the sky.”

Prowler and Frenzy will make their public debut April 8th through 10th at Sea-Air-Space 2024 in National Harbor, Maryland, before returning to Metal Shark’s Louisiana facilities for further testing and development.

“We challenged the men and women of Metal Shark to dream big and to think outside the box to bring Prowler and Frenzy to life in an accelerated timeframe, and I am blown away by their talent, energy, and dedication to this project,” said Mr. Allard. “I look forward to showing off the ingenuity and hard work of our people next week at Sea-Air-Space.”

April 3 Red Sea Update

U.S. Central Command, April 3, 2024

TAMPA, Fla. – Between approximately 3:49 to 10:00 a.m. (Sanaa time) on April 3, USS Gravely (DDG 107) and U.S. Central Command (CENTCOM) forces successfully engaged and destroyed one inbound anti-ship ballistic missile (ASBM) and two unmanned aerial systems (UAS) launched by Iranian-backed Houthi terrorists from Yemen towards USS Gravely in the Red Sea.

There were no injuries or damage reported by U.S., coalition, or commercial ships.

Additionally, during this timeframe CENTCOM forces destroyed a mobile surface-to-air missile system in Houthi controlled territory.

It was determined these systems presented a threat to U.S. and coalition forces and merchant vessels in the region.

U.S. Central Command is dedicated to protecting the freedom of navigation and making international waters safer and more secure for Coalition and merchant vessels.

ARTEMIS program receives

first repatriated Swiss F-5 of Batch for U.S. Navy

The first of 22 repatriated Swiss F-5 Tiger II aircraft arrived at the Tactical Air Support facility at Cecil Field in Jacksonville, Florida, March 21 for the second phase of the Avionics Reconfiguration and Tactical/Modernization for Inventory Standardization (ARTEMIS) program, ferried by a U.S. Marine Corps C-130J from Marine Aerial Refueler Transport Squadron (VMGR) 234.
Naval Air Systems Command, Apr. 4, 2024

CECIL FIELD, Florida – The first of 22 repatriated Swiss F-5 Tiger II aircraft arrived at the Tactical Air Support facility at Cecil Field in Jacksonville, Florida, March 21 for the second phase of the Avionics Reconfiguration and Tactical/Modernization for Inventory Standardization (ARTEMIS) program.

The aircraft, which arrived via a U.S. Marine Corps C-130J from Marine Aerial Refueler Transport Squadron (VMGR) 234, marks a milestone that is the culmination of several months of

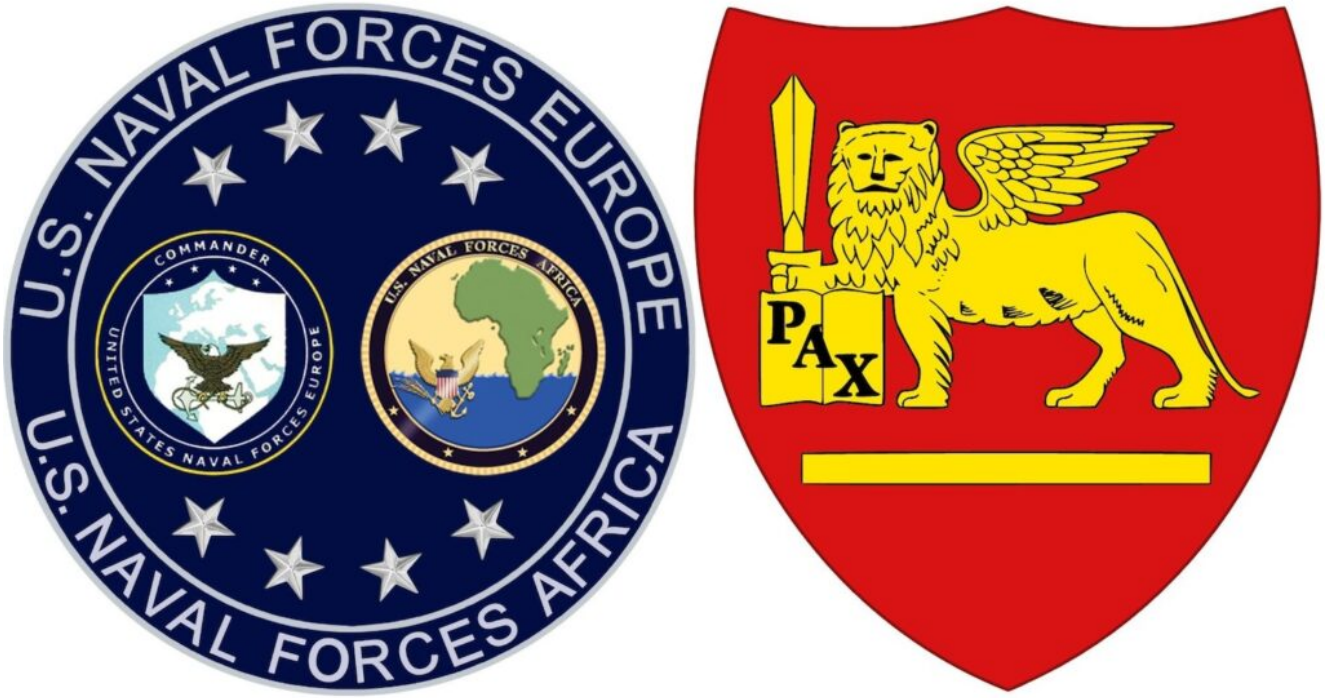
engineering and maintenance efforts performed by the Tactical Air Support team in close coordination with Navy and Marine Corps stakeholders, said Capt. Greg Sutton, Specialized and Proven Aircraft Program Office (PMA-226) program manager.

“Expansion of the F-5 program ensures future success in training Navy and Marine Corps aviators,” Sutton said.

In 2020, the US Navy and the Swiss Government entered into an agreement to repatriate 22 Swiss Air Force F-5 aircraft into the US Navy and US Marine Corps Adversary fleet. As part of the ARTEMIS Program, the Tactical Air Support subcontractor, RUAG, located in Emmen, Switzerland, performs the program’s first phase with aircraft inspection, maintenance, structural component replacement, and engine modification and overhaul. Upon completion of this phase, the aircraft are transferred to Tactical Air Support’s facility to begin phase 2. During this phase, aircraft inspections, maintenance, and repair continue while integrating a new glass cockpit, modern avionics, and other safety modifications.

Initial deliveries of the 22 aircraft are planned by mid-2025 with program completion in 2028 adding 11 F-5 Adversary aircraft to the each to the existing inventory of Navy and Marine Corps.

Black Sea Maritime Forum kicks off in Bucharest



By U.S. Naval Forces Europe-Africa Public Affairs

BUCHAREST, Romania – The third convening of the Black Sea Maritime Forum, cohosted by Romanian Naval Forces, U.S. Naval Forces Europe-Africa and Allied Joint Force Command Naples, Italy, began April 4 in Bucharest, Romania.

“Maritime security within the Black Sea is a shared interest among NATO allies and partner nations,” said Adm. Stuart B. Munsch, commander of U.S. Naval Forces Europe-Africa and Allied Joint Force Naples, Italy. “The free flow of commerce on this important waterway is vital to Black Sea countries and supports global economic prosperity. The U.S. Navy, alongside our NATO Allies and partners, is committed to promoting a secure, prosperous, and interconnected Black Sea region that is free from threats to territorial integrity and from economic coercion – this conference speaks to our commitment.”

This year’s forum will be attended by representatives from

Bulgaria, France, Georgia, Greece, Italy, Japan, Romania, Sweden, Türkiye, the United Kingdom, the United States, as well as delegates from NATO navies and partner nations.

“A multi-institutional event, the Black Sea Maritime Forum represents an excellent opportunity to build bridges between the Black Sea, Mediterranean Sea and the Baltic Sea.” said Vice Admiral Mihai Panait, commander of the Romanian Naval Forces. “We have to continue working together and share our experience in order to improve our knowledge regarding the strategic context, risks and threats specific to the Black Sea region and draw some conclusions concerning to reduce vulnerabilities and increase resilience.”

To facilitate dialogue, panels addressed the Black Sea’s role in the global economy and energy sectors, and Black Sea maritime security cooperation.

This year marks the 75th anniversary of the NATO Alliance, the world’s most successful alliance, recently expanding to 32 Nations through the accession of Sweden.

Allied Joint Force Command (JFC) Naples was activated on 15 March 2004, when its predecessor command, Allied Forces Southern Europe (AFSOUTH), was deactivated after nearly 53 years of successful activity in support of peace and stability in and around its designated area of responsibility. Twenty-two NATO nations contribute to the JFC Naples military staff in order to deter aggression and to contribute to the effective defense of NATO territory and forces and to preserve or restore the security of NATO nations.

U.S. Naval Forces Europe-Africa is actively involved in maintaining security throughout the region. NAVEUR-NAVAF and U.S. 6th Fleet routinely conduct exercises with Bulgaria, Georgia, Romania, Türkiye, Ukraine, and other Black Sea partner nations, training maritime readiness and increasing interoperability capabilities. Commander, Task Force 68

routinely works with Allied and partner nations to construct logistics infrastructure, while training and exercising demining techniques throughout the region. Commander, Task Force 67’s deploys maritime patrol and reconnaissance aircraft, the P-8 Poseidon, to conduct patrols over the Black Sea and surrounding region.

For over 80 years, U.S. Naval Forces Europe-Africa (NAVEUR-NAVAF) has forged strategic relationships with allies and partners, leveraging a foundation of shared values to preserve security and stability.

Headquartered in Naples, Italy, NAVEUR-NAVAF operates U.S. naval forces in the U.S. European Command (USEUCOM) and U.S. Africa Command (USAFRICOM) areas of responsibility. U.S. Sixth Fleet is permanently assigned to NAVEUR-NAVAF, and employs maritime forces through the full spectrum of joint and naval operations.

Navy Awards Boeing Additional Funds for MQ-25 Drones for Testing

The Boeing-owned MQ-25 test unmanned aerial vehicle, T1. (Boeing)

By Richard R. Burgess, Senior Editor

ARLINGTON, Va. — The Navy has awarded Boeing funds to enhance the production of MQ-25A Stingray carrier-based aerial refueling unmanned aerial vehicles, bringing to five the number procured for testing.

The Naval Air Systems Command awarded The Boeing Company a cost-plus-fixed-fee, cost-plus-incentive-fee, fixed-price incentive (firm-target) $657.1 million contract modification for the aircraft, according to a March 29 Defense Department contract announcement.

“This modification adds scope for the production and delivery of two additional MQ-25 System Demonstration Test Article aircraft (air vehicles four and five), to include associated tooling and communication system changes for the Navy,” the announcement said. “Additionally, this modification definitizes obsolescence phase two for non-recurring engineering to address product baseline obsolescence to support low-rate initial production for the MQ-25 Stingray program.”

The MQ-25A is a single-engine carrier-based UAV designed to refuel other aircraft while in flight. The Navy is procuring the Stingray to refuel F-35 Lightning II and F/A-18E/F Super Hornet strike fighters, EA-18G Growler electronic attack aircraft, and E-2D Advanced Hawkeye command and control aircraft.

Procurement of the MQ-25A will allow the Navy to free up Super Hornet strike fighters from the aerial refueling role for their primary combat missions. It also will help preserve the service life of the Super Hornet fleet.

The Navy ordered four development models of the MQ-25A in August 2018, followed by an order for three more in April 2020. The company-owned prototype made its first flight in September 2019 and in 2021 demonstrated its ability to refuel the F-35C, F/A-18E/F, and the E-2D. The September 2022, the Navy awarded Boeing a contract for advance materials for Low-Rate Initial Production Lot 1. Initial operational capability is expected in 2026. The Navy plans to procure 72 Stingrays.

Lockheed Martin Conducts Historic LRASM Flight Test

Orlando, Fla., April 3, 2024 – The U.S. Navy in partnership with Lockheed Martin [NYSE: LMT] successfully conducted a historic Long-Range Anti-Ship Missile (LRASM) flight test with four missiles simultaneously in flight.

During the 12th Integrated Test Event (ITE-12), the U.S. Navy was able to demonstrate the weapon's inherent high-end lethality from mission planning through kill chain integration and its effects on the target. All mission objectives were met, reinforcing high confidence in the weapon's capabilities and superior firepower.

"We have continued to invest in the design and development of LRASM's anti-surface warfare capabilities to ensure that warfighters have the 21st century security solutions they need to complete their missions and come home safely," said Lisbeth Vogelpohl, LRASM program director at Lockheed Martin Missiles and Fire Control. "This event was a testament to our commitment to deliver reliable products that work each and every time, ensuring those who serve stay ahead of ready."

ITE-12 was the next 'big-step' in LRASM's evolution. The successful test was a graduation exercise for the missiles'

latest configuration and lays the foundation for increased capabilities to come.

As a member of the AGM-158 family of cruise missiles, LRASM delivers long-range, highly survivable and lethal capability against highly defended surface combatants that no other weapon in the inventory can provide.