

General Atomics Awarded Contract for Advanced Submarine Propulsion Concept Designs

SEAPOWDER

[Release from General Atomics Electromagnetic Systems](#)

SAN DIEGO – 30 June 2023 – General Atomics Electromagnetic Systems (GA-EMS) announced today that it has been awarded a contract from General Dynamics Applied Physical Sciences to perform propulsion system design, to provide modeling, technical evaluation, and analysis supporting the Defense Advanced Research Projects Agency's (DARPA) Advanced Propulsor, Experimental (APEX) program. The APEX program is intended to develop and demonstrate a new generation of propulsion technology designs to power submarines and other undersea vehicles.

“We are excited to leverage our expertise in system design, modeling, and analysis, along with our extensive manufacturing experience to support the APEX program objectives. We look forward to working with General Dynamics to develop and explore propulsion concepts focusing on efficiency, signature, mechanical design and limits, and operational considerations” said Scott Forney, president of GA-EMS.

Phase 1 of the APEX program will last 24 months. General Dynamics Applied Physical Sciences is the prime contractor. GA-EMS will perform propulsion system design, engineering and analysis in its Boston, MA facility, and any required

manufacturing and testing in its Manufacturing Center of Excellence in Tupelo, MS.

\$119.1 Billion, 407K+ Jobs Supported by the New England Defense Cluster



[Release from SENEDIA](#)

SENEEDIA Releases Economic Impact Report

Details the Economic Strength and Growth in the Region

MIDDLETOWN, RI – SENEDIA, the alliance for Defense tech, talent, and innovation, [today released a new report](#) that highlights the importance of the New England Defense Cluster to U.S. economic growth. The term “Defense Cluster” encompasses all defense-related activities including both the private Defense Industry (defense contractors) and the Military Defense Infrastructure, which includes civilian employees working for the Department of Defense (DoD), active-duty military personnel (Army, Navy, Marine Corps, Air Force, Space Force), and U.S. Coast Guard and National Guard personnel.

In addition to state-level impacts for all six New England

states, the report provides a comprehensive look at the New England region's impact. In 2022, the cluster accounted for \$119.1 billion in economic output, representing 9.2 percent of the region's GDP. It also accounted for 407,523 jobs, generating more than \$40 billion in income for households.

"The Defense Cluster is an engine of innovation nationwide, and especially here in New England, where billions of dollars in economic activity are generated and hundreds of thousands of military and civilian employees have high-wage, high-tech, high-demand careers," said Molly Donohue Magee, SENEDIA executive director. "A robust Defense Cluster is essential to national security and this report demonstrates that it is equally critical for our economy."

New England's Defense contracts are growing at a faster rate than the national average, making it a major contributor to the U.S. defense industry and regional economy. The cluster significantly impacts job creation, income, and output across every New England state, and has a strong multiplier effect and economic linkages with other sectors in the region.

"From small, advanced manufacturing businesses and start-up tech companies to major defense contractors and military installations, the Defense Cluster represents tremendous opportunities for the workforce and for our economy," said Senate Armed Services Committee Chairman Jack Reed (D-RI). "Across New England, we are developing new technologies and capabilities, modernizing our military, building next-gen submarines, and driving broader economic growth today and for the future."

High-level findings from the report are summarized [on the SENEDIA website](#), with a full version and state-level highlights available for download.

"Today's report provides a timely, comprehensive look at the

power and potential of the Defense Cluster and we look forward to seeing how policymakers, employers, and military leaders can make use of this important information,” said Magee.

To learn more and to download the report, [visit the SENEDIA website.](#)

Fairbanks Morse Defense Celebrates Opening of 45,000-Square-Foot Training and Service Center Campus in Chesapeake, Va.



[Release from Fairbanks Morse Defense](#)

BELoit, Wis. – May 18, 2023 – Fairbanks Morse Defense (FMD), an Arcline Investment Management portfolio company, celebrated the grand opening of its newest Training and Service Center Campus in Chesapeake, Va. located at 733 Curtis Saunders Court on May 17th. The state-of-the-art, 45,000-square-foot facility is positioned to offer fully integrated service and technology solutions to the largest concentration of Navy, Military Sealift Command, and Coast Guard fleets in the US.

Local dignitaries joined FMD CEO George Whittier and other company executives for a ribbon-cutting ceremony, facility tour, and other activities to commemorate the occasion. Dignitaries included Brenda Roberts of Congresswoman Jen Kiggins’s office (Virginia Second District); US Navy Vice Admiral Bill Houston, Commander of the Submarine Forces; Eric Matthies, incoming OPC Program Manager for the US Coast Guard; Jordan Watkins of the Virginia Economic Development Partnership; Ben White with the Chesapeake Economic Development Department; and multiple City of Chesapeake Councilmembers.

“Fairbanks Morse Defense has made it clear that they are going ‘all-in’ by making a significant investment in this training and service center in Chesapeake,” said Steven Wright, Director of Chesapeake Economic Development. “We’re ready to welcome and support the FMD service team and the numerous technicians who will benefit from advanced training on critical equipment and look forward to supporting FMD’s future growth in our community.”

The Training and Service Center campus will bring approximately 50 new jobs to Chesapeake. It will also serve as a hub for training current and future engineers that will contribute to the mission success of American maritime defense

operations.

FMD's Chesapeake Training and Service Center includes the following:

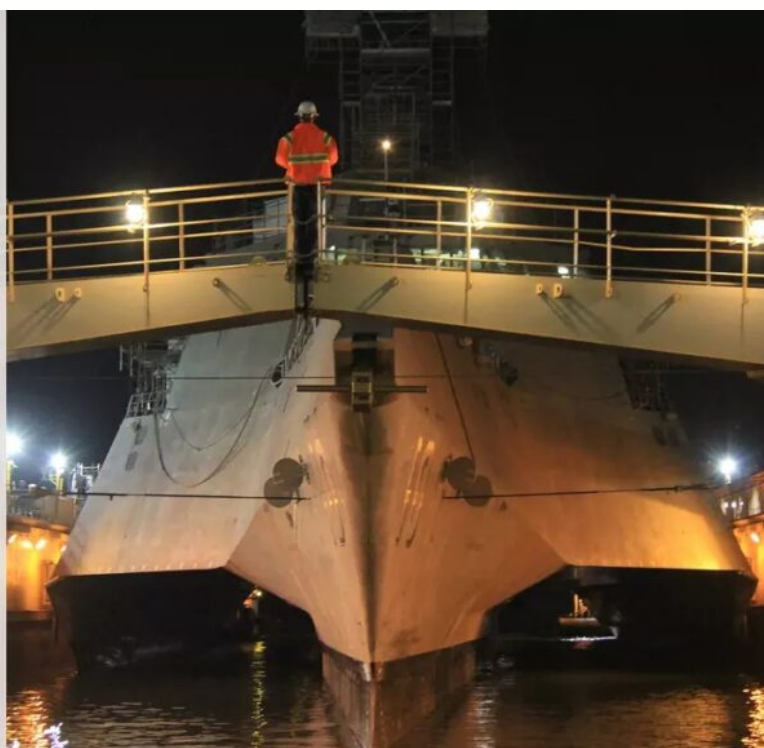
- 13,000 square feet of training center shop space, including four fully dressed workstations featuring four different FMD engines for students to pull apart and reassemble, in addition to dedicated training available on all FMD products
- 20,000 square feet of service center space, providing local and responsive full-service capabilities that include equipment overhauls and repairs as well as unit exchange solutions for rapid turnaround.
- 6,000 square feet for training center offices, classrooms, break rooms, and conference space.
- 6,000 square feet for service center offices, a tech library, a service center classroom, and break rooms.

The site can also be significantly expanded, allowing FMD and its family of brands to utilize additional space over time.

"Fairbanks Morse Defense continues to lean into the US Defense market by locating this training and service facility where Navy, Military Sealift Command, and Coast Guard forces can effectively access its capabilities and participate in hands-on development activities working shoulder to shoulder with their FMD industry partners," said George Whittier, FMD CEO. "We hope this facility will help fill the pipeline for the defense industrial base with a diverse and enthusiastic group of service technicians who possess the skills to perform jobs that are in demand today, as well as jobs that we'll need in the future."

BAE Systems' U.S. shipyards recognized for safety leadership by Signal Mutual

Signal Mutual
Industry Safety
Leadership
Award



[Release from BAE Systems](#)

NORFOLK, Va. – Feb. 7, 2023 – For the second year in a row, BAE Systems, Inc.'s Ship Repair business has been recognized by Signal Mutual as a top company for safety. The prestigious Signal Mutual Industry Safety Leadership award was presented to BAE Systems, one of only five companies to receive it, during the industry group's annual conference in Salt Lake City this week.

In presenting the award, Signal Mutual noted that, in 2022, BAE Systems had a noteworthy safety culture because of the

leadership's clear visibility and engagement of with employees. Signal Mutual also noted that BAE Systems' focus on safety in its shipyards resulted in a low frequency rate of claims compared to industry standards, no excessive loss cases, and no fatalities for more than two years.

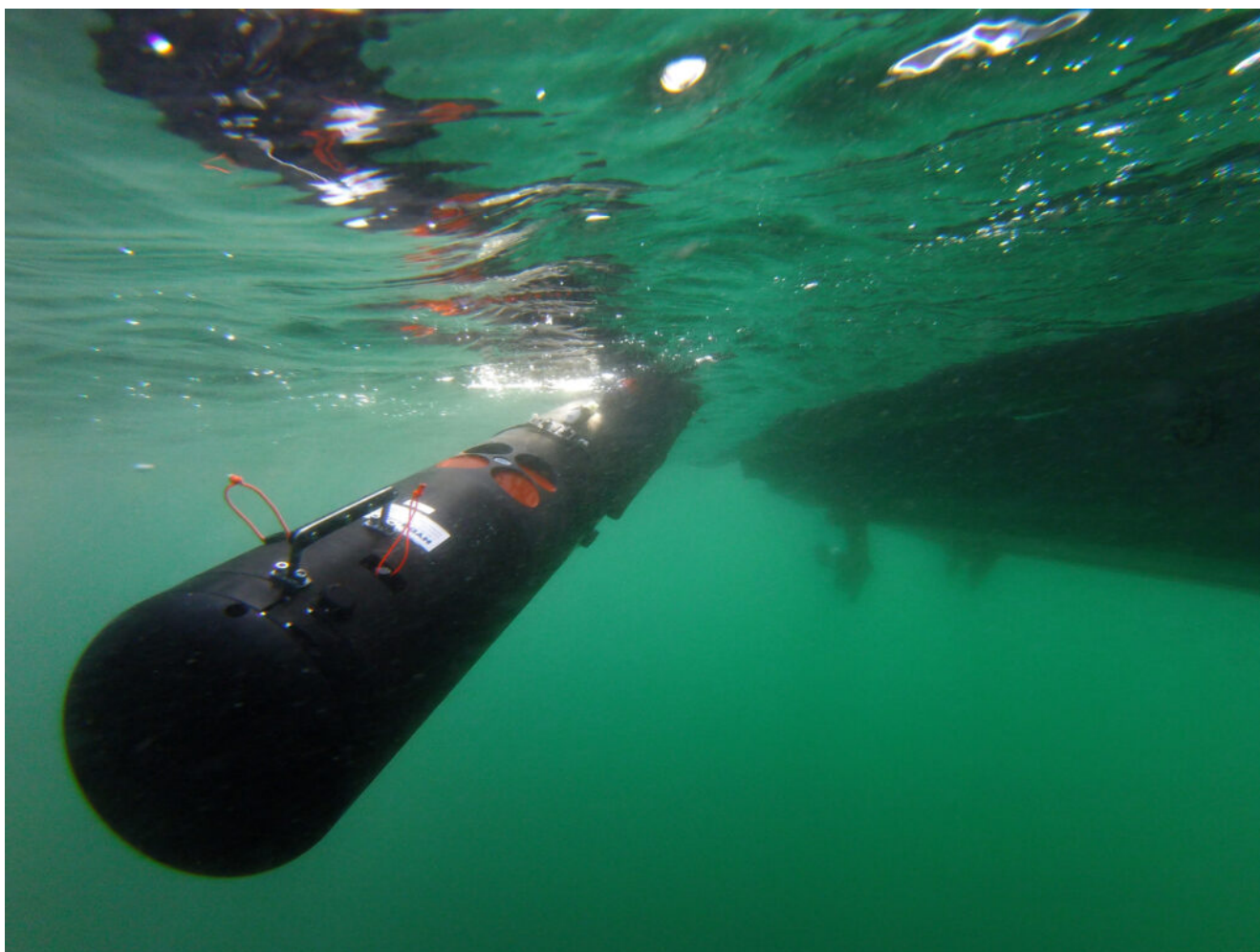
"Shipyards can be hazardous. However, our leaders' commitment to empowering all employees to declare a 'Stop Work' when they see something out of order is critical to ensuring that our teammates complete their work and return home safely every day," said Paul Smith, vice president and general manager of BAE Systems Ship Repair. "This award instills pride within us as industry leaders, and it inspires us to continue protecting each other and setting high standards for those who work alongside us."

BAE Systems employs nearly 3,000 people across three shipyards in California, Florida, and Virginia who work alongside thousands of U.S. Navy personnel, commercial vessel owners, subcontractors and vendors who are also based at the sites.

"Everyone in the team is empowered and trusted to be a safety, health, and environmental leader," said Noushin Sprossel, Safety, Health and Environment (SHE) director for BAE Systems Ship Repair. "Our tremendous progress towards achieving SHE excellence and recognition for our performance reflects our commitment to make the safety and health of our workforce a priority."

Signal Mutual is an organization that provides workers' compensation services to about 300 high-performing organizations in the maritime industry, including nearly 100 shipyard companies.

NATO Uses Unmanned Systems Exercises to Stay Ahead in Capability Development



A REMUS 100 unmanned underwater vehicle deploys after being launched by a Sailors during REP(MUS) in Portugal, 2019. REP(MUS) 2022 merged into NATO's Dynamic Messenger exercise in 2022. *U.S. NAVY / Chief Mass Communication Specialist Travis Simmons*

TROIA, Portugal – NATO, the Portuguese Navy, industry and other stakeholders recently conducted back-to-back exercises designed to integrate unmanned capabilities into naval operations and assist the alliance and its member states in maintaining an operational edge.

The Portuguese Navy-hosted REP(MUS) exercise – the navy's

Recognized Environmental Picture (REP) activity, amalgamated since 2019 with NATO's Maritime Unmanned Systems (MUS) initiative – took place across September's first three weeks. REP(MUS) merged into Dynamic Messenger, NATO Maritime Command's inaugural maritime unmanned systems exercise, which took place in September's final week. Both exercises occurred off Troia in southern Portugal.

The exercises aimed to drive forward NATO and member state integration of maritime unmanned systems into operational experimentation.

"These [exercises] are an accelerant to making sure we think ahead to stay ahead," Vice Adm. Keith Blount, a UK Royal Navy officer and commander of Maritime Command, told a press briefing at Striking and Support Forces NATO headquarters in Lisbon.

"We're setting commanders at sea real challenges in trying to adjust from a traditional command-and-control way of delivering warfighting capability to one that is very much at the technological edge, using equipment many of these commanders have probably not seen and operated with before," Blount added. "That drives tactics, training, procedures, the education of officers ... [and] the doctrine we follow."

Regarding Dynamic Messenger, Blount said, "This has been quite a journey in the development and construction of this exercise, going back more than two years ... We build naturally on the success of REP(MUS), a well-established exercise, and now take it on to the next step – the integration of the capability into our [activities] at sea."

For the journey's next steps, Blount said, "One of the very first things that's going to happen is we're going to start planning next year's Dynamic Messenger, building on the lessons from this year. We're doing a lot of other work as well, to try and make operational experimentation more of a

norm outside of exercises so we can have it as a free good to being out in the maritime commons, doing this without any detriment to the capability we are delivering day by day.”

Alongside MARCOM, Supreme Allied Command Transformation was the second NATO strategic-level headquarters involved in delivering Dynamic Messenger.

“SACT has particular roles around innovation and experimentation within the alliance, so Dynamic Messenger provides an excellent opportunity for us to pursue both those areas,” Royal Navy officer Vice Adm. Guy Robinson, SACT’s chief of staff, told the briefing. “Working closely with [MARCOM], we can come together hopefully to get some really useful insights from which we can both develop capability within the alliance and help allies shape their own capability investments.

“We’re always trying to look ahead and ensure we maintain that competitive edge, and to embrace those new technologies when the time is right for the alliance,” Robinson said. “Exercises like this can help showcase opportunities for allies to see where they may want to invest in the future.

“The real advantage of an exercise like [Dynamic Messenger] is that ... by bringing Admiral Blount’s operational commanders into the picture, we then understand the real, practical application of these new technologies,” Robinson said. Unmanned systems “may work well in an isolated environment. [However], when you put them with commanders who have to deploy them, recover them, and see whether they are now more effective and more efficient, that’s when you get the real insight. That’s when you get the data you need to really see how they can change the battlespace.”

US and Canada, Exercise in South China Sea to Support Japan Deployment



Arleigh Burke-class guided-missile destroyer USS Higgins (DDG 76), center, cruises in formation with Izumo-class multi-purpose destroyer JS Izumo (DDH 183) left, and a Japanese submarine while conducting routine operations in the South China Sea, Oct. 1. *U.S. NAVY / Mass Communication Specialist 1st Class Donovan K. Patubo*

SOUTH CHINA SEA – Maritime forces from Canada, Japan and the United States concluded exercises in the South China Sea Oct. 1, demonstrating a shared commitment to a free and open Indo-Pacific, said Commander, Task Force 71/Destroyer Squadron 15 Public Affairs.

The Japan Maritime Self-Defense Force (JMSDF) led the exercise in support of their Indo-Pacific deployment,

The exercises included JMSDF's JS Izumo (DDH 183) and JS Takanami (DD 110). The multi-lateral training for the three maritime forces served to strengthen skills in maritime operations, anti-submarine warfare operations, air warfare operations, live-fire missile events, and advanced maneuvering scenarios.

"Through increased practical exercise, together we improved tactical capabilities and interoperability between the JMSDF, the U.S. Navy and the Royal Canadian Navy, and we promoted cooperative relationship of Japan-U.S.-Canadian naval forces in order to realize a free and open Indo-Pacific," said Rear Adm. Hirata Toshiyuki, commanding officer of Escort Flotilla 4.

Representing the U.S. Navy was Arleigh Burke-class guided-missile destroyer USS Higgins (DDG 76) and fleet replenishment-oiler USNS Rappahannock (T-AO 204).

"Participating in multinational operations over the last month provided a fantastic opportunity to work with our friends and allies in the South China Sea," said Cmdr. Joseph McGettigan, commanding officer of USS Higgins. "The seamless interoperability between all ships demonstrates the strength of our alliances and goes a long way to promote a free and open Indo-pacific. Thank you to the JMSDF for leading a well-run and professional operation!"

Canada was represented by HMCS Winnipeg (FFH 338) and HMCS Vancouver (FFH 331).

"It has been a pleasure to sail with our partners and allies over the past month," said Cmdr. Kevin Whiteside, HMCS Vancouver commanding officer. "Working together, we were able to leverage each other's experience and familiarity operating in the area and build upon it for follow-on deployments. Supporting each other's separate, yet similar, deployments to the Indo-Pacific demonstrates our common goal of supporting

peace, security and prosperity in the region.”

Higgins is assigned to Commander, Task Force 71/Destroyer Squadron (DESRON) 15, the Navy’s largest forward-deployed DESRON and the U.S. 7th fleet’s principal surface force.

USNS Mercy Concludes Pacific Partnership 2022



Military Sealift Command hospital ship USNS Mercy (T-AH 19) returns to San Diego, Sept. 30. Mercy participated in the 17th annual Pacific Partnership mission, the largest annual multinational humanitarian assistance and disaster relief preparedness mission conducted throughout the Indo-Pacific region. *U.S. NAVY / Senior Chief Mass Communication Specialist Rosa Paschall*

SAN DIEGO – Military Sealift Command hospital ship USNS Mercy (T-AH 19) returned to its homeport Sept. 30 following completion of the 17th annual Pacific Partnership mission, U.S. 3rd Fleet Public Affairs said in an Oct. 1 release.

Pacific Partnership is the largest annual multinational humanitarian assistance and disaster relief preparedness mission conducted throughout the Indo-Pacific region.

“It has truly been an honor to lead a diverse crew of committed men and women on the Pacific Partnership 2022 team,” said Pacific Partnership 2022 Mission Commander Capt. Hank Kim. “We set out to strengthen ties and create new friendships with our host and partner nations, and we achieved this with resounding success.”

The mission team worked collectively with participating host and partner nations to enhance regional interchangeability and disaster response capabilities, increase security and stability in the region, and foster new and enduring friendships in the Indo-Pacific.

“One of the mission highlights was seeing the multinational knowledge exchange and passion for learning from everyone who was a part of Pacific Partnership,” said Capt. Jeffrey Feinberg, Mercy’s commanding officer. “Every participant brought something new to the table, whether it was a safer way to construct the foundation for a building, a new approach to a patient procedure, or a more efficient means for disaster response. That collaboration is what enhances every nation’s capacity to respond to crisis and provides an enduring impact. That, and the friendships we make, are what will remain long after Mercy returns home.”

Host nations included Vietnam, Palau, the Philippines, and Solomon Islands. Partner nations included Australia, Chile, Japan, the Republic of Korea, and the United Kingdom.

Pacific Partnership saw more than 15,000 patients, completed 10 major construction projects, participated in more than 80 host nation outreach events, and conducted humanitarian assistance and disaster relief workshops in each mission stop during the five-month mission.

Analyst: Unmanned Systems Developers Need to Create Platforms That Allow Human Interaction



Unmanned systems that can operate alone, such as this MQ-4C Triton, could take on more missions if they could also be controlled by people for some missions, a defense analyst said

Sept. 22. *NORTHROP GRUMMAN*

ALEXANDRIA, Va. – The developers of unmanned systems must do more to create platforms that can operate in the “messy middle” between being totally autonomous and being controlled remotely by humans, with some autonomy but also some ability for humans to interact with the vehicle, an analyst said Sept. 22 during a defense industry event.

Bryan Clark, a senior fellow and director of the Center for Defense Concepts and Technology at Hudson Institute, told attendees of the AUVSI Defense conference that a lot of focus has been placed on getting unmanned systems to the field faster, and the way to do that is to introduce a manned element to make the system more flexible – which also opens up new missions the platform can do.

“It requires you to increase the level of human involvement in the machine and operate in this ‘messy middle’ where you have varying levels of human-machine interaction,” he said after the event.

Right now, most unmanned platforms fall in two categories: a completed automated intelligence, surveillance, and reconnaissance platform that operates independently of the manned force, and remotely operated vehicles that are entirely dependent on human input.

“Those are basically the bulk of the unmanned vehicle spectrum,” Clark said. “There’s not that much in the middle where you have the mixed operator-machine interaction. It’s hard to build a force around that, because you’re not sure how much operator intervention you need for a particular mission and scenario, but that’s where the value lies.

“If you have a force that can operate between a lot and a little human intervention depending on the vehicle, it gives your commanders lots of options, and it mitigates some of the automation shortfalls,” he continued.

Clark said the Navy is already having to take that approach with some unmanned surface vehicles that were supposed to be entirely automated for months at a time.

“They are finding out they’re not lasting as long as they were hoping,” he said. “It’s not a six-month deployment – it’s more like a week at a time, and then they need to fix and maintain and refuel them, and some cases may have to put people on there all the time.”

It is the same situation with unmanned aerial vehicles, such as MQ-4C Tritons that can operate on their own but would need human intervention in order to be used for something more “creative” like as a targeting platform for missile attacks. “You need humans operating sensors and telling the vehicle where to go,” he said.

“It’s the messy middle where you have an undefined level of automation and human interaction by design,” he added. “That’s where 90% of the DoD mission set lies. Until you are ready to bring unmanned systems into that middle part where most of the work is, you’re never going to realize their benefits.”

U.K. and U.S. Conduct SINKEX during Atlantic Thunder 22



The U.K. and U.S. navies conducted a sinking exercise Sept. 7 in the North Atlantic. *U.S. NAVY*

ATLANTIC OCEAN – Ships and aircraft from the United Kingdom and the United States conducted a long-planned multi-domain sinking exercise (SINKEX) called Atlantic Thunder 22 in the North Atlantic, Sept. 7, U.S. Naval Forces Europe-Africa Public Affairs said Sept. 23.

Atlantic Thunder 22 participants, assigned to U.S. Naval Forces Europe, U.S. Air Forces Europe, the U.K. Royal Navy and U.K. Royal Air Force sank the decommissioned guided missile

frigate ex-USS Boone, during the live-fire SINKEX to develop combined proficiency in tactics, targeting and live-firing against a surface target at sea.

“Sinking exercises not only provide excellent opportunities to gain real world operational experience in long range maritime strikes but also demonstrate the collective power of our combined forces,” said Rear Adm. Oliver “Ollie” Lewis, U.S. Naval Forces Europe-Africa’s (NAVEUR-NAVAF) Director of Maritime Operations. “Most importantly, gaining real world proficiency in the tactics, techniques and procedures we have developed and tested alongside our British Allies not only validate our weapons systems but ultimately contribute to NATO alliance readiness.”

The exercise was not only a unique and valuable opportunity for sharpening and proving partner capabilities, but also an exercise of multiple firsts.

The ex-Boone was struck by Martlet air-to-surface missiles from Wildcat helicopters assigned to the Type 23 frigate HMS Westminster. The helicopters provided inaugural laser targeting for fixed-wing U.K Royal Air Force Typhoons using Paveway IV precision guided munitions.

A U.S. Navy P-8 Poseidon maritime patrol aircraft assigned to Patrol Squadron 46 shot a long range anti-ship missile. U.S. Air Force F-15E Eagles, assigned to 494th Fighter Squadron, dropped maritime strike joint direct attack munitions.

Finally at sea, the U.S. Navy Arleigh Burke guided-missile destroyer USS Arleigh Burke (DDG 51) struck the ex-Boone with a Standard Missile 6 (SM-6), the first anti-ship SM-6 engagement in the U.S. European Command area of responsibility, while HMS Westminster fired the first live RGM-84D Harpoon missile salvo from the U.K. since 2004.

Also aboard Arleigh Burke, Marines assigned to the 22nd Marine Expeditionary Unit provided vital imagery and battle damage

assessment by deploying a V-BAT 128 vertical take-off and landing unmanned aerial vehicle, marking the first launch of a V-BAT 128 from an Arleigh Burke guided-missile destroyer.

“Ex Atlantic Thunder has demonstrated that U.K. and U.S. naval and air forces can integrate to deliver an end-to-end kill chain against a maritime target at long range,” said Cmdr. Ed Moss-Ward, commanding officer of HMS Westminster. “The integration of high end weapons, sensors and communications with our NATO allies is key to the collective war fighting capability of the Alliance demonstrated by the sinking exercise. The firings have supported the development of the Royal Navy’s targeting and weapon capabilities, and afforded opportunity to conduct realistic training to validate tactics and operating procedures.”

Former U.S. Navy vessels used in SINKEXs, referred to as hulks, are prepared in strict compliance with regulations prescribed and enforced by the Environmental Protection Agency under a general permit the Navy holds pursuant to the Marine Protection, Research and Sanctuaries Act.

Prior to being transported for participation in a sinking exercise, each vessel undergoes a rigorous cleaning process for environmental safety. Aligned with U.K. Ministry of Defense environmental policy, robust monitoring was conducted above and below the sea’s surface with trained personnel using specialized equipment to reduce the overall risk of inadvertently impacting the marine environment and marine mammals during the SINKEX.

Ex-Boone is a decommissioned guided missile frigate, which entered United States Naval service, May 15, 1982. It was decommissioned on Feb. 23, 2012. The 20th ship of the Oliver Hazard Perry class, it was the first ship named for Vice Adm. Joel Thompson Boone, a Medal of Honor recipient and the most highly decorated medical officer during World War I.

UNITAS Concludes After Successful Exercise



Commander, U.S. Naval Forces Southern Command/U.S. 4th Fleet, Rear Adm. Jim Aiken, congratulates participants for their performance at the UNITAS LXIII Closing Ceremony in Rio de Janeiro, Sept. 22. *U.S. NAVY / Cmdr. Myers Vasquez*

RIO DE JANEIRO – UNITAS LXIII (63), the world’s longest-running multinational maritime exercise concluded with a closing ceremony in Rio De Janeiro on Sept. 22, U.S. Naval Forces Southern Command / U.S. 4th Fleet said in a release.

UNITAS, Latin for “unity,” was conceived in 1959, first executed in 1960 and held every year since. This year marked

the 63rd iteration of the world's longest-running annual multinational maritime exercise.

This year's exercise was hosted by the Brazilian navy and included 19 warships/vessels, one submarine and 21 aircraft that conducted scenario-driven joint and combined operations and training in and off the coast of Rio De Janeiro. The exercise coincided with Brazil's bicentennial, a historical milestone commemorating 200 years of the country's independence and the birth of their navy.

"It is exciting to see 19 nations from across Central and South America, the Caribbean, Europe, and Africa participating in UNITAS," said Rear Adm. Jim Aiken, commander, U.S. Naval Forces Southern Command/U.S. 4th Fleet. "This exercise is a demonstration of not only our commitment to the region, but also the strong relationships forged between our nations. The Western Hemisphere is our shared home and exercises like UNITAS reinforce our permanent geographical and cultural ties, connecting us to our shared history and our shared future."

Navy and marine forces from Brazil, Cameroon, Chile, Colombia, Dominican Republic, Ecuador, France, Guyana, Jamaica, Mexico, Namibia, Panama, Paraguay, Peru, South Korea, Spain, United Kingdom, Uruguay and the United States participated in the exercise.

While the overarching goal was to develop and test command and control of forces at-sea, training in this exercise addressed the spectrum of maritime operations. Specifically, there were scenarios addressing electronic warfare, anti-air warfare and air defense, anti-surface warfare, live fire, maritime interdiction, littoral operations and amphibious operations.

"One of the main benefits of UNITAS is the ability of all participating nations to train together, and exchange ideas and tactics," said Capt. Meger Chappell, deputy commander,

Destroyer Squadron 40, and deputy commander, UNITAS Task Group 138.20. "Over the course of the exercise I saw firsthand how the participating nations came together as a multinational task force to meet all objectives. Together we have strengthened our maritime partnerships, enhanced our proficiency and improved our collaboration and interoperability."

The exercise progressed in phases, beginning in port with sporting events and community relations projects to build relations between partner nations.

The at-sea phase included a multi-threat, multi-day scenario that allowed participants to work together, further increasing preparedness for real-world crises that would require a multinational force response effort. Events included: surface tactical maneuvers, illegal drug trafficking training, live-fire exercises, anti-submarine warfare exercises, air defense exercises and maritime interdiction operations.

The amphibious phase included U.S. Marines with partner nations taking positions at areas along the coast to train in support of greater naval operations. This phase also consisted of landing from naval vessels.